

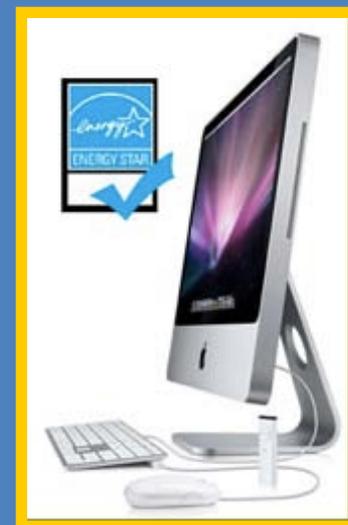


• August 15-18, 2010 • Dallas, Texas •
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Procurement of Energy-Efficient Products

Procurement of Energy-Efficient Products



Linda Mesaros
August 16, 2010

Energy-Efficient Products

- ENERGY STAR
- EPEAT
- FEMP-designated
- Standby Power



Benefits of Energy-Efficient Products

- Help meet Federal energy reduction goals
- Stimulate the economy
- Reduce operating costs
- Reduce building energy use
- Reduce greenhouse gas emissions
- Foster energy independence
- Reduce fossil fuel use
- Can shift the market towards greater production of energy-efficient products improving availability and reducing consumer cost
- Set a clear standard for energy performance
- Use 25% - 50% less energy than traditional counterparts



Impact of these Benefits on the Federal Government

- The Federal government alone owns and operates nearly 500,000 buildings.
- The Federal government spent \$24.5 billion on energy costs in fiscal 2008. Of that sum, \$7 billion was spent to power Federal buildings.
- The Federal government spends \$500 billion annually on goods and services.



Federal Mandates

- Energy Independence and Security Act of 2007
- Energy Policy Act of 2005
- Executive Order 13514
Federal Leadership in Environmental, Energy, and Economic Performance
- Executive Order 13423
Strengthening Federal Environmental, Energy, and Transportation Management
- Executive Order 13221
Energy-efficient Standby Power Devices
- Federal Acquisition Regulation (FAR)

Energy Independence and Security Act of 2007

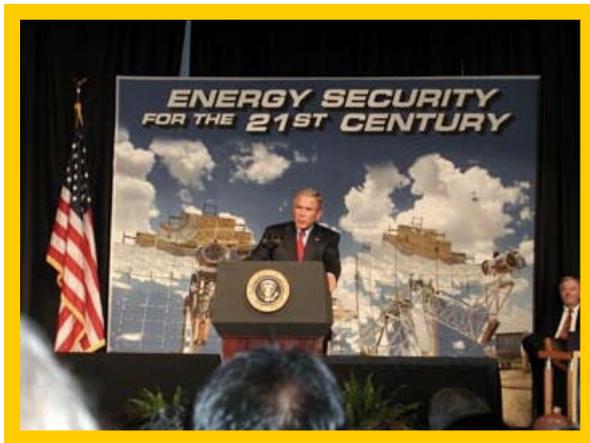
- Designed to increase energy efficiency and the availability of renewable energy--
- New energy efficiency equipment standards set by law: includes a variety of new standards for lighting and for residential and commercial appliance equipment. The equipment includes residential refrigerators, freezers, refrigerator-freezers, metal halide lamps, commercial walk-in coolers and freezers, furnace fans, and battery chargers among others.
- Agencies are directed to purchase products that limit standby power use.
- DOE shall provide list of eligible products.



Energy Policy Act of 2005

Agencies shall:

- Buy only ENERGY STAR qualified and FEMP-designated products
- Incorporate ENERGY STAR and FEMP performance criteria into project specifications, guide specifications, and construction, renovation, and services contracts that include provision of energy-consuming products and systems.



Executive Order 13514

Ensure that 95% of all new contracts and contract modifications for products and services are:

- Energy-efficient
- Water-efficient
- Biobased
- Environmentally preferable
- Non-ozone depleting
- Contain recycled content
- Non-toxic or less toxic alternatives



Executive Order 13423

Includes procurement practices that incorporate sustainable environmental practices:

- energy-efficiency
- environmentally preferable
- biobased
- water-efficient
- recycled content
- 95% of electronic product acquisitions must be EPEAT



Federal Acquisition Regulation (FAR)

- Agencies shall purchase ENERGY STAR qualified, EPEAT-registered, FEMP-designated, or Standby power products.



What's in the FAR?

- **FAR 7.103(n)(2) Acquisition Plans**
- Comply with the policies regarding procurement of biobased products, products containing recovered materials, and environmentally preferable and energy-efficient products and services.



What's in the FAR?

Describing Agency Needs:

- **FAR 11.002(d)(1)** Policy
- When agencies acquire products and services, various statutes and executive orders require consideration of:
 - Energy-efficient products and services
 - Products and services that utilize renewable energy technologies
 - Products containing energy-efficient standby power devices
 - Products containing recovered materials
 - Biobased products
 - Environmentally preferable products and services



What's in the FAR?

Energy and Water Efficiency and Renewable Energy

- **FAR 23.202** Policy The Government's policy is to acquire supplies and services that promote energy and water efficiency, advance the use of renewable energy products, and help foster markets for emerging technologies. This policy extends to all acquisitions, including those below the simplified acquisition threshold.



What's in the FAR?

- **FAR 23.203 Energy-efficient products**
- (1) When acquiring energy-consuming products listed in the ENERGY STAR program or Federal Energy Management Program (FEMP)--
 - (i) Agencies shall purchase ENERGY STAR or FEMP-designated products; and
 - (ii) For products that consume power in a standby mode and are listed on FEMP's Low Standby Power Devices product listing, agencies shall--
 - (A) Purchase items which meet FEMP's standby power wattage recommendation or document the reason for not purchasing such items; or
 - (B) If FEMP has listed a product without a corresponding wattage recommendation, purchase items which use no more than one watt in their standby power consuming mode. When it is impracticable to meet the one wattage requirement, agencies shall purchase items with the lowest standby wattage practicable;



What's in the FAR?

- **FAR 23.203 Energy-efficient products (continued)**
- (2) When contracting for services or construction that will include the provision of energy-consuming products, agencies shall specify products that comply with the applicable requirements in paragraph (a) (1) of this section.



What's in the FAR?

FAR 23.206 Contract Clause

- ...insert the clause at 52.223.15, Energy Efficiency in Energy-Consuming Products, in solicitations and contracts when energy-consuming products listed in the ENERGY STAR program or FEMP will be--
 - (a) Delivered;
 - (b) Acquired by the contractor for use in performing services at a Federally-controlled facility,
 - (c) Furnished by the contractor for use by the Government; or
 - (d) Specified in the design of a building or work, or incorporated during its construction, renovation, or maintenance.



What's in the FAR?

FAR 23.703 Policy. Agencies must--

- (a) implement cost-effective contracting preference programs promoting energy-efficiency, water conservation, and the acquisition of environmentally preferable products and services; and



What's in the FAR?

Electronic Products Environmental Assessment Tool

- **FAR 23.705** Electronic products environmental assessment tool. General. As required by E.O. 13423, agencies must ensure that they meet at least 95 percent of their annual acquisition requirement for electronic products with Electronic Product Environmental Assessment Tool (EPEAT)-registered electronic products, unless there is no EPEAT standard for such products. This policy applies to contracts performed in the United States, unless otherwise provided by agency procedures.



What's in the FAR?

- **FAR 52.223-15** Energy Efficiency in Energy-Consuming Products
- The contractor shall insure that energy-consuming products are energy-efficient products (i.e. ENERGY STAR products or FEMP-designated products) at the time of award for products that are--
 - Delivered;
 - Acquired by the contractor for use in performing services at a Federally-controlled facility
 - Furnished by the contractor for use by the Government; or
 - Specified in the design of a building or work, or incorporated during its construction, renovation, or maintenance.



FAR EPEAT Clause

52.223-16 IEEE 1680 STANDARD FOR THE ENVIRONMENTAL ASSESSMENT OF PERSONAL COMPUTER PRODUCTS (DEC 2007)

(a) Definitions. As used in this clause—

Computer monitor means a video display unit used with a computer.

Desktop computer means a computer designed for use on a desk or table.

Notebook computer means a portable-style or laptop-style computer system.

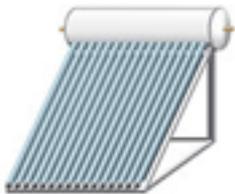
Personal computer product means a notebook computer, a desktop computer, or a computer monitor, and any peripheral equipment that is integral to the operation of such items. For example, the desktop computer together with the keyboard, the mouse, and the power cord would be a personal computer product. Printers, copiers, and fax machines are not included in peripheral equipment, as used in this definition.

(b) Under this contract, the Contractor shall deliver, furnish for Government use, or furnish for contractor use at a Government-owned facility, only personal computer products that at the time of submission of proposals were EPEAT Bronze registered or higher. Bronze is the first level discussed in clause 1.4 of the IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products.

(c) For information about the standard, see www.epeat.net.

Energy-Efficient Products: ENERGY STAR

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



Energy-Efficient Products: ENERGY STAR

- Products can earn the ENERGY STAR label by meeting the energy efficiency requirements set forth in ENERGY STAR product specifications.
- There are seven categories of ENERGY STAR products for government agencies: commercial appliances, building products, commercial food service equipment, computers and electronics, heating and cooling, lighting and fans, and plumbing.



GIVE IT A REST. Use the ENERGY STAR [power management](#) settings on your computer and monitor so they go into save mode when not in use. Also use a power strip as a central "turn off" point to completely disconnect equipment from the power supply.



LIGHT UP YOUR WORKLIFE. Replace the light bulb in your desk lamp with an [ENERGY STAR qualified bulb](#), which will last up to 10 times longer and use 75 percent less energy. Turn off the lights when you leave, especially at the end of the day.

Energy-Efficient Products: ENERGY STAR

- Product example:

ENERGY STAR gas condensing water heaters

About ENERGY STAR Water Heater, Gas Condensing

Overview

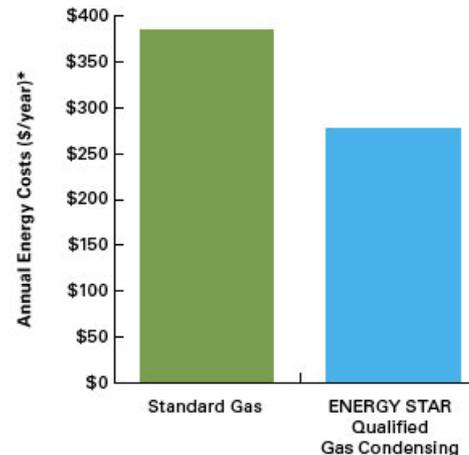
Specifications

Buying Guidance

FAQs

ENERGY STAR qualified gas condensing water heaters are blazing a new trail in water heating technology. Qualified models due out mid-2010 will utilize an enhanced design to cut water heating expenses by about 30%, while also delivering superior performance. If you have time to plan ahead, consider this exciting new technology for your next water heater purchase.

Cut Your Water Heater Energy Costs by 30%



*Based on average household of 2.6 occupants, U.S. Census, 2006.



Energy-Efficient Products: FEMP-Designated

- FEMP identifies required purchasing specifications and performance requirements for a category of products, which is typically an energy consumption level within the upper 25% of the product category.



Energy-Efficient Products: FEMP-designated

- Major Categories of FEMP-designated Products:
 - Lighting
 - Commercial and Industrial Equipment
 - Food Service Equipment
 - Office Equipment
 - Appliances
 - Residential Equipment
 - Plumbing
 - Construction products
 - Low standby power



Energy-Efficient Products: FEMP-designated

- Product example: Refrigerator/freezer
- The FEMP provides efficiency recommendations for each product type. Procurement officers can then compare specifications for available models on the market to the FEMP recommendations. (FEMP does not recommend specific product models.)

Efficiency Recommendation ^a			
Product Type	Recommended ^b	Recommended ^c (24.0 cu. ft.)	Best Available (24.0 cu. ft.)
Refrigerator	0.10V + 2.04 kWh/day or less	4.44 kWh/day	3.97 kWh/day
Refrigerator-Freezer	0.27AV - 0.71 kWh/day or less	7.81 kWh/day	5.86 kWh/day
Freezer	0.40V + 1.38 kWh/day or less	10.98 kWh/day	6.79 kWh/day
Ice Cream Freezer	0.39V + 0.82 kWh/day or less	10.18 kWh/day	n/a ^d

Cost-Effectiveness Example (Reach-in, Solid Door Refrigerator, 24.0 cubic feet)			
Performance	Base Model	Recommended Level	Best Available
Daily Energy Use	5.2 kWh	4.4 kWh	3.1 kWh
Annual Energy Use	1,891 kWh	1,621 kWh	1,132 kWh
Annual Energy Cost	\$113	\$97	\$70
Lifetime Energy Cost ^d	\$890	\$760	\$530
Lifetime Energy Cost Savings	—	\$130	\$360

Energy-Efficient Products: Standby Power

- Standby power is the power consumed by a product when it is in the lowest power consuming mode. This typically occurs when the product is switched off or not performing its primary purpose.
- The FEMP Standby Power Data Center contains searchable lists of product specifications in over 20 product categories. Standby data for these products have been submitted to FEMP either by ENERGY STAR or directly from manufacturers.
- Major product types in the Standby Power Data Center include: cell phones, computer monitors, copiers, desktop computers, laptop computers, microwaves, printers, room air conditioners, scanners, televisions.



Energy-Efficient Products: Standby Power

- To use the FEMP Standby Power Data Center, enter a product type such as “printer” or enter company name, brand name, model number, or other features in the “search text.”
- The display will show manufacturer makes and specific models of desktop computers in order of “declared standby power.” FEMP’s recommended standby power will also display.

Search the Standby Power Data Center

Please enter the search term below to search for Company Name, Brand Name, Model number, Product Type or Other Features.

Search Text:

Product Type:



Search Results

Below are 258 product results based on your search criteria. Click on 'Export to Excel' to save the results to your computer.

FEMP Recommended Standby Power	Declared Standby Power	Product Type	Company Name - Brand Name	Model Number	Other Features
2 W	0 to 1 W	Desktop computer	IBM- ThinkCentre A30	8199-xxx	
2 W	0 to 1 W	Desktop computer	IBM- ThinkCentre A30	8316-xxx	P4, w/ WOL Enabled
2 W	0 to 1 W	Desktop computer	IBM- ThinkCentre A30	8316-xxx	
2 W	0 to 1 W	Desktop computer	IBM- ThinkCentre A30	8434-xxx	P4, w/ WOL Enabled
2 W	0 to 1 W	Desktop computer	IBM- ThinkCentre A30	8434-xxx	

Energy-Efficient Products: Standby Power

- Standby Power Data Center:

www1.eere.energy.gov/femp/technologies/standby_power.aspx

- How to Buy Products with Low Standby Power:

www1.eere.energy.gov/femp/technologies/buying_low_standby.html

- Some Products with Low Standby Power Capability:



computers



cell phones



printers

Energy-Efficient Products: EPEAT

- EPEAT: **E**lectronic **P**roduct **A**ssessment **T**ool
- “Green electronics made easy”
- Available from Federal and commercial sources
- easy-to-use, on-line tool helps purchasers select and compare computer desktops, laptops and monitors based on 23 environmental attributes.
- Must meet ENERGY STAR efficiency specifications
- Database of registered EPEAT products
- Registered products rated bronze, silver, or gold based on % of 28 optional criteria met.



Energy-Efficient Products: EPEAT

Environmental Benefits of EPEAT Purchases 2008:

- Reduce use of toxic materials including cadmium, mercury, and lead
- Preclude the disposal of 43 thousand tons of hazardous waste
- **ENERGY STAR** savings:
 - ❖ Saves enough electricity to power 700,000 U.S. homes for 1 year; reduces greenhouse gas emissions; reduces water pollutant emissions
 - ❖ Reduction of over 1.57 million metric tons of greenhouse gas emissions — equivalent to taking over one million US passenger cars off the road for a year
- With over 40 countries participating, reduces the environmental cost of computing worldwide



Energy-Efficient Products: EPEAT

- EPEAT Quick Search Tool:
Search by criteria or
manufacturer

<http://www.epeat.net>



EPEAT Quick Search Tool				
For Products Registered in <input type="text" value="United States"/>				
	 BRONZE	 SILVER	 GOLD	Totals
Desktops	<u>1</u>	<u>56</u>	<u>87</u>	<u>144</u>
Displays	<u>1</u>	<u>214</u>	<u>117</u>	<u>332</u>
Integrated Desktop Computers	<u>1</u>	<u>42</u>	<u>11</u>	<u>54</u>
Notebooks	<u>41</u>	<u>613</u>	<u>516</u>	<u>1170</u>
Thin Clients	<u>0</u>	<u>9</u>	<u>0</u>	<u>9</u>
Workstation Desktops	<u>1</u>	<u>0</u>	<u>13</u>	<u>14</u>
Workstation Notebooks	<u>0</u>	<u>1</u>	<u>6</u>	<u>7</u>
Total:	<u>45</u>	<u>935</u>	<u>750</u>	<u>1730</u>

Manufacturers:

<http://www.epeat.net/companies.aspx>

Criteria:

<http://www.epeat.net/Criteria.aspx>

Success Stories: Sandia National Laboratory

Sandia's energy management team installed an ENERGY STAR roof and integrated a cutting-edge photovoltaic system into the roof structure.

- The roof not only insulates, but generates 3.2 kilowatts of power for the building--enough power for about 1-3 homes in Albuquerque, New Mexico.
- This innovation not only helps Sandia National Laboratory, but demonstrates that installing these roofs in 50% of Sandia, New Mexico's buildings could potentially reduce power usage by 56 Gigawatt-hours per year or 35% of their total annual energy consumption.



Success Stories: Naval Station, Pearl Harbor

- Developed Hawaii Navy Energy Vision 2020--a strategic view of the Pearl Harbor region's energy requirements.
- Included procurement of an increased amount of ENERGY STAR lighting products and equipment.
- Replaced more than 10,000 incandescent light bulbs with compact fluorescent lamps.



- Conducted a rigorous energy awareness and training program.

Success Stories: Air Force First in Operation Change Out

- All 64 major Air Force bases in the United States are participating in ENERGY STAR's campaign to change out incandescent bulbs with new energy-efficient compact fluorescent bulbs. Operation Change Out is a joint effort between the U.S. Department of Defense and the U.S. Department of Energy.
- Beginning with Earth Day 2008, the Air Force has changed out over 228,000 bulbs.
- This will save enough energy to power 3,841 homes for a year.
- Eliminating greenhouse gases equivalent to removing 11,400 cars from the road each year.
- The Air Force will save *\$7.5 million over the lifetime of the bulbs.*



Success Stories: General Services Administration, Denver

- Replaced out-dated boilers with the latest state-of-the-art, ultra-low pollution, and high-efficiency boilers.
- In addition to saving energy and money, replacement with new low-emissions boilers significantly reduced pollution emissions.
- New high efficiency burners on the boilers in three buildings were replaced where where full replacement was not practical.



Success Stories: EPEAT Purchasing Takes Off

- **Thirteen of the 22 Federal agencies** reported meeting the goal of 95% or higher EPEAT purchasing in their 2008 IT acquisitions.
- **Department of Veterans Affairs:** 100% of the 290,623 Dell desktops and monitors leased by VA between September 2007 and December 2008 were EPEAT gold or silver products.
- **Social Security Administration:** 100% of the 24,673 desktop computers purchased by SSA were EPEAT-registered Gold. All of the 26,948 LCD monitors purchased were EPEAT-registered, 15,600 were EPEAT-registered Silver, and 11,348 were EPEAT-registered Gold.
- **General Services Administration:** GSA purchased more than 600 EPEAT certified computers in FY08. All computers were 100% compliant with EPEAT purchases.



Purchase Tools

ENERGY STAR, EPEAT, FEMP-designated, and Standby power:

- Model contract language with ENERGY STAR and FEMP-designated products--construction and information technology
- EPEAT model contract language
- Database of EPEAT-registered products
- Performance requirements
- Energy cost calculators
- Standard PowerPoint presentation template and training
- ENERGY STAR, FEMP-designated, Standby Power and EPEAT Success Stories
- Additional information

Resources and Tools

Where to buy energy-efficient products:

GSA Advantage!

- DoD Emall
- Commercial sources



FUTURE ACTIVITIES

- Increase Federal outreach and education
- Increase compliance and reporting activities
- Increase partnerships with other government agencies
- Enhance website features
- Promote business opportunities
- Pilot projects
- Awards

Program Contact Information

ENERGY STAR Program

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

<http://www.energystar.gov/products>

Federal Energy Management Program

1-877-EERE-INF (1-877-337-3463)

<http://www.eere.energy.gov/femp/procurement>

EPEAT-registered Products

<http://www.epeat.net>

A world map with a textured, golden-brown appearance on a dark blue background, showing the continents of North America, South America, Europe, Africa, Asia, and Australia.

Mesaros Associates, Inc.

Linda Mesaros

843-452-6428

linmesaros@aol.com

www.mesarosassociates.com