

Recent Developments in Federal Electronics Stewardship



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Why Focus on Electronics?

- Rapid advances in IT have resulted in:
 - Increased sales of electronics worldwide
 - Increased energy consumption
 - A new stream of obsolete and discarded products





Purchasing Facts

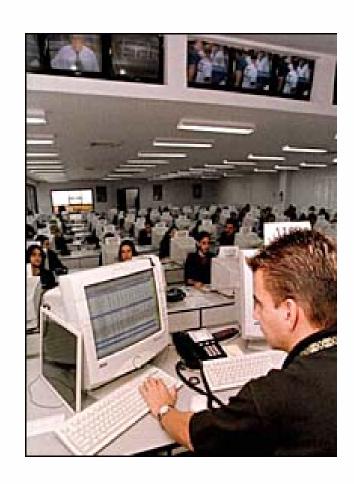
Americans own some 2 billion electronic products – about 25 products per home!!!

(Consumers Electronics Association)



Use Facts

- U.S. has more than 180 million computers in use, which consume nearly 58 billion Kilowatt-hr/yr, or about 2% of the US annual electricity use
- PCs and monitors consume between 5 to 13% of all the electricity use in the office
- It's estimated that 66% of the electricity consumed by PCs and monitors is wasted



End-of-life Facts

- U.S. homes and businesses discard an average of 130,000 PCs a day
- In 2005, only about 330,000 tons of consumer electronics were recycled (12.5%)
- Certain types of electronic equipment contain materials such as lead, mercury, and other toxic constituents
- Potential adverse effects on human health and the environment if improperly managed during disposal





The Federal Electronics 'Footprint'

- The Federal government is spending an average \$63
 billion annually in IT products and services
- While the computers' hardware is generally expected to last 7 yrs, the equipment is normally used for an average of 3 yrs
- The Federal government disposes of an estimated half a million computers yearly!



Federal Electronics Stewardship

- Eleven Federal agencies and EOP, including DOD, signed a historic MOU on November 15, 2004
- Agencies committed to:
 - Increase the demand for greener electronic products
 - Promote best management practices
 - Reduce the economic and environmental life cycle costs
 - Encourage growth of the infrastructure for reuse, demanufacturing, and recycling of electronics



"Strengthening Federal Environmental, Energy, and Transportation Management."

- Signed on January 24th, 2007
- Consolidates prior E.O.s and integrates sustainable practices
- Adopts Memorandums of Understanding:
 - High Performance Buildings
 - Electronics Stewardship
- Sets goals in several sustainable areas including <u>electronics stewardship</u>
- New goals as stringent or more stringent than before



Section 2 (h) Goals for Agencies -ensures that:

(i) When acquiring an electronic product to meet its requirements, meets at least 95 percent of those requirements with an Electronic Product Environmental Assessment Tool (EPEAT)-registered electronic product, unless there is no EPEAT standard for such product.



Section 2 (h) Goals for Agencies -- ensures that:

(ii) Enable the Energy Star feature on agency computers and monitors.



Section 2 (h) Goals for Agencies -- ensures that:

(iii) Establish and implement policies to extend the useful life of agency electronic equipment.



Section 2 (h) Goals for Agencies
-- ensures that:

(iv) Use environmentally sound practices with respect to disposition of agency electronic equipment that has reached the end of its useful life.



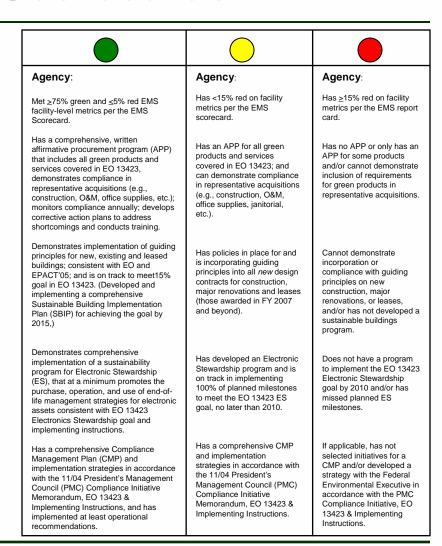
"Strengthening Federal Environmental, Energy, and Transportation Management."

In implementing the new EO:

- Existing and new working groups will help develop the necessary tools and guidance
 - FESWG Federal Electronics Stewardship Working Group
- Progress will be measured and reported by the OMB scorecard process

New OMB Scorecards

- Tracks how well Feds are executing target management initiatives:
 - Environmental
 - Energy
 - Transportation
- Resembles scorecard structure in President's Management Agenda (PMA)



New OMB Scorecards

- Address existing requirements (EOs/statutes/MOUs)
- Focus on Progress/Results
 - Green successful
 - Yellow mixed results
 - Red unsatisfactory
- Consolidate actions/plans
- Hold agencies accountable
 - Updated every January/July

Focus on weaknesses and improvements!



Met ≥75% green and ≤5% red EMS

affirmative procurement program (APP)

construction, O&M, office supplies, etc.);

monitors compliance annually; develops

that includes all green products and

facility-level metrics per the EMS

Has a comprehensive, written

services covered in EO 13423.

representative acquisitions (e.g.,

corrective action plans to address shortcomings and conducts training.

demonstrates compliance in

Agency:

Scorecard

Agency:

metrics per the EMS scorecard

products and services

Demonstrates implementation of guiding principles for new, existing and leased buildings; consistent with EO and EPACT'05: and is on track to meet15% goal in EO 13423. (Developed and implementing a comprehensive Sustainable Building Implementation Plan (SBIP) for achieving the goal by

Demonstrates comprehensive implementation of a sustainability program for Electronic Stewardship (ES), that at a minimum promotes the purchase, operation, and use of end-oflife management strategies for electronic assets consistent with EO 13423 Electronics Stewardship goal and implementing instructions.

Has a comprehensive Compliance Management Plan (CMP) and implementation strategies in accordance with the 11/04 President's Management Council (PMC) Compliance Initiative Memorandum, EO 13423 & Implementing Instructions, and has implemented at least operational recommendations.

Has <15% red on facility

Has an APP for all green covered in EO 13423; and can demonstrate compliance in representative acquisitions (e.g., construction, O&M, office supplies, janitorial,

Has policies in place for and is incorporating guiding principles into all new design contracts for construction, major renovations and leases. (those awarded in FY 2007 and beyond).

Has developed an Electronic Stewardship program and is on track in implementing 100% of planned milestones to meet the EO 13423 ES goal, no later than 2010.

> Has a comprehensive CMP and implementation strategies in accordance with the 11/04 President's Management Council (PMC) Compliance Initiative Memorandum, EO 13423 & Implementing Instructions.

Agency:

Has >15% red on facility metrics per the EMS report

Has no APP or only has an APP for some products and/or cannot demonstrate inclusion of requirements for green products in representative acquisitions.

Cannot demonstrate incorporation or compliance with guiding principles on new construction, major renovations, or leases, and/or has not developed a sustainable buildings program.

Does not have a program to implement the EO 13423 Electronic Stewardship goal by 2010 and/or has missed planned ES milestones.

If applicable, has not selected initiatives for a CMP and/or developed a strategy with the Federal Environmental Executive in accordance with the PMC Compliance Initiative, EO 13423 & Implementing Instructions.



OMB Environmental Stewardship Scorecard

- Includes 5 metrics:
 - Meet Environmental Management Systems (EMS) protocol for Agency and all appropriate facilities
 - Comprehensive Green Purchasing Program
 - Implement Sustainable Green Building Program
 - Implement Sustainability Program for Electronics Stewardship
 - Compliance Management Plan & Implementation Strategy



OMB SCORECARD STANDARDS FOR SUCCESS





OMB SCORECARD STANDARDS FOR SUCCESS



Does not have a program to implement the EO 13423 Electronics Stewardship goal by 2010 and/or has missed planned ES milestones.



EO 13423 Implementing Instructions *Electronics Stewardship Plan*

- Each agency shall develop and submit to OFEE a plan to implement electronics stewardship practices for all eligible owned or leased electronic equipment in support of the goals in section 2(h) of the E.O
- The plan shall:
 - Address the three life-cycle phases for electronics assets: acquisition, operations and maintenance, and end-of life
 - Be developed and implemented in coordination with the energy, environmental, information technology, acquisition, financial and property officers, and facility managers and maintenance personnel, within each agency

EO 13423 Implementing Instructions *Electronics Stewardship Plan*

The Plan shall address how to:

- Acquire 95 percent EPEAT™ registered products
- Ensure that Energy Star® features are enabled on 100 percent of computers and monitors
- Have policies and programs to extend the useful lifetime of electronic equipment
- Ensure that all non-usable electronic products are reused, donated, sold, or recycled using environmentally sound management practices at end of life
- Address reporting procedures to be used in measuring progress toward meeting goals (FESWG)



EXECUTIVE OFFICE OF THE PRESIDENT COUNCIL ON ENVIRONMENTAL QUALITY WASHINGTON, D.C., 20503

March 28, 2007

MEMORANDUM

HEADS OF EXECUTIVE BRANCH DEPARTMENTS

AND AGENCIES

FROM: JAMES L. CONNAUGHTON, CHAIRMAN

SUBJECT: IMPLEMENTATION INSTRUCTIONS AND REQUIREMENTS FOR

EXECUTIVE ORDER 13423

On January 24th, 2007, the President signed the Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management." The Order sets goals in the areas of energy efficiency, acquisition, renewable energy, toxics reductions, recycling, renewable energy, sustainable buildings, electronics stewardship, fleets, and water conservation. In addition, the Order reinforces the requirement for more widespread use of Environmental Management Systems as the framework in which to manage and continually improve these sustainable practices. This is a timely and strategic step forward, building upon the many and notable accomplishments of the Federal community. As a result, we will be more efficient and effective in meeting our mission, while at the same time leading by example in the areas of environmental and energy stewardship.

In accordance with Section 4 (b) of the order, 1 am issuing the first set of Implementation Instructions and Requirements to provide additional detail and direction to agencies as they work to fulfill the goals of the Order. These instructions were developed in clear consultation with your relevant experts. These instructions should be considered mandatory, and implementation is expected as part of complying with the Order. Over time, relevant agencies and work groups will develop and issue additional guidance on specific topics.

In addition, please note the following:

- The existing working groups created under the prior Executive Orders, including but not limited to the groups on purchasing/recycling, Environmental Management Systems, energy efficiency, fleets and fuels, high performance buildings, and electronics stewardship, will remain in place.
- Agencies that have not yet done so must name a Senior Official in accordance with section 3(d) of the order.
- Reporting on progress of these sustainable practices done under the prior Executive Orders is to continue until new reporting requirements are issued.



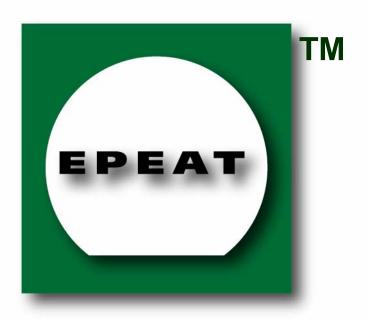
Federal E-nitiatives







Greening Electronics Procurement with EPEAT™





What is EPEAT™?

Electronic Product Environmental Assessment Tool

- An easy to use environmental procurement tool designed to help institutional purchasers compare and select desktop computers, laptops and monitors based on their environmental attributes.
- Standard comprised of 51 environmental performance criteria (IEEE 1680 American National Standard for the Environmental Assessment of Personal Computer Products)
- System for identifying and verifying products which meet these criteria (www.epeat.net)



EPEAT[©] Performance Categories

- Environmentally Sensitive Materials
- Materials Selection
- Design for End of Life
- Product Longevity/Life Cycle Extension
- Energy Conservation
- End of Life Management
- Corporate Performance
- Packaging





EPEAT™ Tiers



EPEAT Bronze – Meets all 23 mandatory criteria



EPEAT Silver − Meets all mandatory criteria and at least 50% of the optional criteria



EPEAT Gold – Meets all mandatory criteria and at least 75% of the optional criteria



EPEAT™ Verification Process

- Like ENERGY STAR®, companies:
 - -Sign MOU to participate
 - -Register products as compliant
 - -Must meet specific verification for all criteria
- Products routinely scrutinized:
 - Products verified after registration
 - A single attribute or set of attributes across all products
 - All attributes within a single product or a subset of all products

EPEAT™ Registered Products

(as of 4/07/08)

Product Desktops EPEAT Registered Products Search Tool Total 4 60 32 96

Integrated Systems

Monitors

Totals

Notebooks



24 Participating Manufacturers



Apple

CIARA-TECH



CTL





Enano Computers





Gateway



HP



HYUNDRI Hyundai IT America





(b) LG Electronics



MDG Computers Canada Inc.





















MPC Computers

NEC Display

Northern Micro

One Laptop Per Child

Panasonic

Philips Electronics

Prosys Tech Corporation

Samsung

Sony Electronics

Toshiba

Viewsonic

Zonbu

As of 11/8/2007



Requirements For Feds to Buy Environmentally Preferable Electronics

EPEATTM is now in the FAR:

23.705 Electronic products environmental assessment tool.

• (a) 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.



FAR Required EPEAT™ Contract Language

- "(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."

OR

Alternate I (Dec 2007). As prescribed in 23.706(b)(2), substitute the following paragraph (b) for paragraph (b) of the basic clause:

• "(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 Silver registered or higher. Silver is the second level discussed in clause 1.4 of the IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products"

Recommended Language For New Contracts

 Suppliers are required to block non-EPEAT registered products on their electronic catalogs that customers may buy from through this contract.





Recommended Language For New Contracts

 Suppliers are required to provide quarterly reports quantifying the number of EPEAT registered products purchased under this contract. The information must be reported in a matrix providing the following data for the current quarter, the fiscal year, and the duration of the contract.

	Unregistered	Bronze	Silver	Gold	Total
Desktops	3	5	39	67	114
Laptops	0	0	99	0	99
Integrated Systems	0	0	70	67	137
Monitors	0	0	50	78	187



Requirements For Feds to Buy Environmentally Preferable Electronics

 Buying EPEAT[©] registered products directly impacts Agency OMB Environmental Scorecard Ratings

 Energy Policy Act requires feds to buy Energy Star qualified and FEMP compliant electronics

Feds Using EPEAT™











Department of Defense, Army	\$15.0B
Department of Homeland Security	\$6.024B
NASA SEWP IV GWAC	\$15.0B
NASA ODIN Contract	\$.100B
GSA Alliant GWAC	\$5.0B
Department of Energy	\$0.4B
Department of the Interior	\$0.2B
Department of Transportation	\$0.04B
Environmental Protection Agency	\$0.04B
Executive Office of the President	\$0.007B
TOTAL	\$41.81B









View the full list of users at www.epeat.net/RFP.aspx

EPEATTM Environmental Benefits

(First Six Months Vs Conventional Products)

Environmental Benefit	Achievement	Equivalent to	
Energy savings	13.7 billion kWh	Electricity for 1.2 million U.S. homes for one year	
Primary material savings	24.4 million metric tons	Weight of 189 million refrigerators	
Greenhouse gas emission savings	1.07 million tons of carbon equivalent (CE)	Removing 852,000 passenger cars from the road for 1year	
Air emission savings	56.5 million tons		
Water emission savings	118,000 metric tons	See size of 64.5 Olympic pools	
Toxic material savings	1,070 metric tons	Weight of 534,000 bricks	
Hazardous waste savings	41,000 metric tons	Weight of 20.5 million bricks	



EPEATTM Next Products

- EPEAT solicited input from stakeholders to identify and prioritize the next product sets
- The four priority product categories are:
 - Imaging Products (Printers, copiers, etc.)
 - TVs
 - Servers
 - Handhelds (cell phones, PDAs, etc.)

To join a workgroup, please send an email to Holly Elwood at elwood.holly@epa.gov



The Federal Electronics Challenge (FEC)





Federal Electronics Challenge (FEC)

- FEC is a partnership program that encourages Federal procurement and leasing environmentally preferable electronics, and reduce the impacts of electronics during use and disposal
- In addition to the MOU agencies, about 200 Federal facilities, covering more than 630,000 employees, have signed up for the challenge.
- The FEC provides resources and technical assistance for improving electronics management practices, and gives annual recognition to Partners that have achieved program goals



FEC Environmental Achievements

(FY 2006)

Environmental Benefit	Achievement	Equivalent to Electricity to power 11,898
Energy savings	134,924 MWh	U.S. households for one
Primary material savings	29,715,633 kg	Weight ofe230,354
Greenhouse gas emission	10,592,255 kg of	refrigerators Removing 8,407 passenger
savings	carbon equivalent	cars from the road for one
Savings	(CE)	year
Air emission savings	557,300,344 kg	557,300 metric tons
Water emission savings	1,165,739 kg	1,166 metric tons
Toxic material savings	5,195 kg	Weight of 2,597 bricks Solid waste generated by 404
Municipal solid waste savings	780,332 kg	U.S. households in one
Hazardous waste savings	202,600 kg	Weight of 101,300 bricks
Cost savings		\$11.7 million





FEC Promotes Environmentally Preferable End-of-Life Management Practices

- The Federal Electronics Reuse and Recycling Challenge (ERRC) encourages Federal facilities to recycle, or donate their used computers and other electronic equipment to local schools
- In 2006-07, 14 winners were selected from 12 agencies and 124 facilities that participated in the Challenge
- The program successfully reused and recycled approximately 2.4 million pounds of electronics during the fivemonth period between November 11, 2006 and Earth Day 2007
- ERRC 2007-08 is a year long challenge!!



FEC Provides Training



Federal Electronics Stewardship Conference



West Coast Federal Electronics Stewardship Workshop



Federal Environmental Symposium



FEC Partners Conference Calls

FEC Rewards Efforts





FEC Gold Level White House Awards Winners



ERRC Awards Winners

FEC Silver and Bronze Level
Awards Winners



FEC Highlights MODEL PROGRAMS



Patuxent River Naval Air Station

US ArmyFort Hood

Francis E. Warren AFB

LEADING BY EXAMPLE

- Federal agencies and their facilities are committed to:
 - Promoting the designing and purchasing of environmentally preferable electronic products
 - Extending the useful life of electronic equipment
 - Improving on sound end-of-life management practices
 - Saving energy, and conserving natural resources



FOR MORE INFORMATION:

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