



The Federal Electronics Challenge

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EPA Region III and DOD Conference Call



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Purpose of this Briefing

- Familiarize the Region III DOD with the Federal Electronics Challenge
- Describe problems with e waste and connections between the FEC and EMS
- Encourage federal facility participation in the FEC
- Offer to mentor other federal facilities with FEC
- How many have heard of or are members of the FEC?



What is the Federal Electronics Challenge?

- The FEC is a purchasing, use, and end-of-life management challenge issued for federal facilities or agencies to:
 - **Purchase greener electronic products**
 - **Manage electronic assets in an environmentally sound manner**
 - **Receive recognition, assistance and facilitate networking to improve current practices**



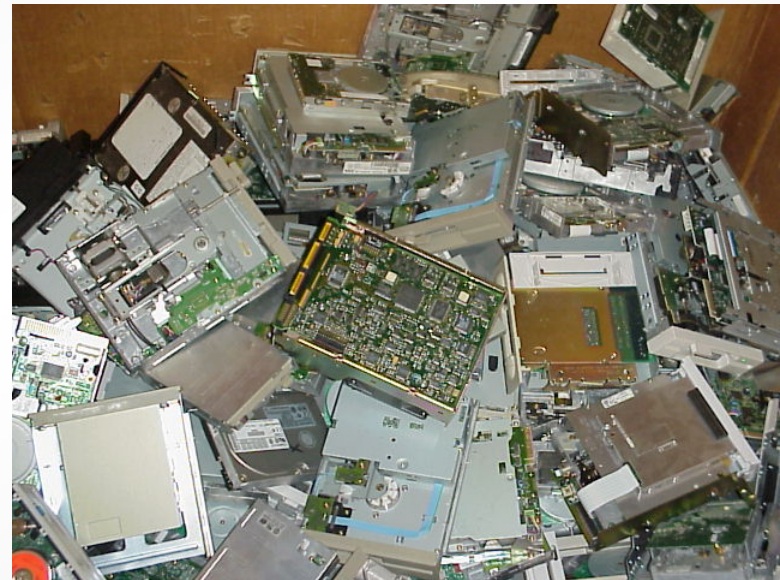
Overview of the FEC

- Voluntary program to assist federal facilities with sound management of electronics
- Core focus of FEC = best management practices
- Flexible: Individual facility determines its:
 - Level of commitment
 - Goal(s)
 - Life cycle phase(s) on which to focus



What Electronics Does FEC Address?

- Monitors (computers and TV)
- CPUs
- Copiers
- Laptops
- Keyboards
- Equipment with LCD
 screens
- Printers
- Cell phones
- Other as determined by the facility
- Medical and other technical equipment

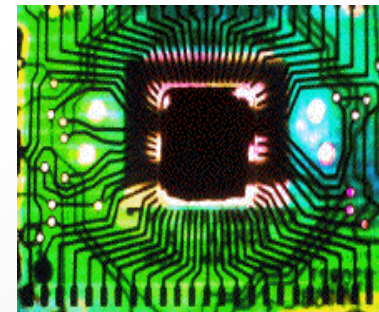




What is an electronic product?

It contains an integrated circuit

- a small electronic device made out of a semiconductor
- “Brown goods” appliances that are intensively electronic
- Includes office and consumer electronics

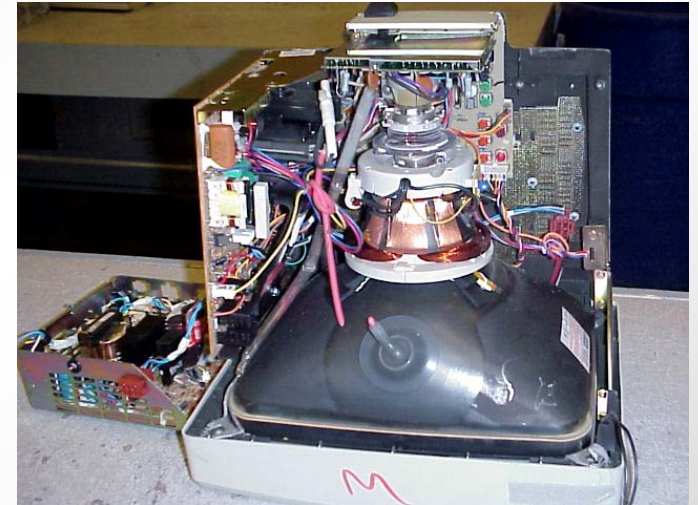




E waste contains hazardous substances such as lead, mercury, chromium, cadmium, and beryllium

Also contains valuable metals such as aluminum, copper and precious metals - gold, silver, platinum and palladium

Components can be reused, recycled, or reclaimed in the current marketplace





- Why Focus on Electronics?
- Complex & growing waste stream
 - As many as **10,000** federally owned computers surplused each week
 - Lack of cohesive system for federal electronics management
- Federal buying power
 - enhance growth of market for environmentally preferable electronic products
 - Increase infrastructure for reuse & recycling of obsolete electronics



From This



To This



Why Focus on Electronics?

- 1.8 million employees in U.S. Federal sector
- Represent about 7% of market share for electronics
- FY 2004 IT budget – \$155 Billion (Hardware & Services)
- FY 2005 IT budget - \$60.8 Billion
- FY 2006 IT budget – approx. \$65.1 Billion



The Federal government's purchase and use of electronics are not sustainable

- Average life cycle of Federally owned computers is 3 years
- Significant quantities are ending up in storage closets, warehouses, or landfills
- Liability Avoidance and Environmental Stewardship are important to the Federal Community





Why Focus on Electronics?

- Most Cathode Ray Tub (CRTs) in TVs and monitors test hazardous under Federal hazardous waste rules
- EPA amending CRT rules to streamline management requirements to encourage more recycling: less paperwork, and fewer handling requirements if bound for recycling
- EPA will also try to address exports of CRTs
- New rule being reviewed by OMB could be promulgated in 2006



Europe driving world-wide change in design and management of electronics

- European Union (EU) waste electrical and electronic equipment (WEEE) Directive:
- Requires manufacturers to finance the collection, treatment, recovery, and environmentally sound disposal of E-waste from households and other entities.
<http://www.icer.org.uk/WEEE20030127.pdf>



WEEE and RoHS

- Directive on restriction of the use of certain hazardous substances
- By July 1, 2006, all electronics sold in Europe must contain no lead, mercury, cadmium, or hexavalent chromium, except in certain specified cases.
- Two types of brominated flame retardants are also banned.
- http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_037/l_03720030213en00190023.pdf
- Japan following suit



State Regulation of e waste

- CA has a fee at point of purchase for all: TVs, and PCs to pay for recycling; “imports” RoHS Directive; strictly limits exports
- ME has municipality pay for collection and manufacturer pay for recycling
- CA, MA, ME, MN, VA all ban LF of CRTs
- NE states banding together to develop joint identical state legislation; other states may act too (MN, WA, OR???)



Memorandum of Understanding

- Signed on Nov 15, 2004
- Eleven Federal Agencies and EOP
- Represent ~ 80% of the annual Federal IT budget
- Potential to influence marketplace towards more environmentally sound electronic products & services
- Foundation to improve quality, performance, and environmental management of Federal electronic assets throughout their life cycle

MEMORANDUM OF UNDERSTANDING BETWEEN

The Executive Office of the President
Department of Agriculture
Department of Defense
Department of Energy
Department of Health and Human Services
Department of Homeland Security
Department of the Interior
Department of Justice
Department of Transportation
Department of Veterans Affairs
Environmental Protection Agency
General Services Administration

TITLE: Promoting Sustainable Environmental Stewardship¹ of Federal Electronic Assets

PURPOSE: The Executive Office of the President, Department of Agriculture, Department of Defense, Department of Energy, Department of Health and Human Services, Department of Homeland Security, Department of the Interior, Department of Justice, Department of Transportation, Department of Veterans Affairs, Environmental Protection Agency, and General Services Administration (the Parties), wish to enter into this Memorandum of Understanding (MOU) to develop and promote common strategies for using environmentally sustainable technologies and practices to improve the quality, performance, and environmental management of Federal electronic assets throughout their life cycle. Electronic assets covered by this MOU include, but are not limited to, equipment used in communications, information systems, military, and scientific applications. The Parties define the life cycle of electronic equipment broadly to include acquisition, design, manufacture, assembly, distribution, use, reuse, demanufacture, and recycling. The Parties also intend to capitalize on other applicable efforts, including work already underway by the Federal Electronic Challenge (FEC).

BACKGROUND: Electronic waste encompasses a broad and growing range of electronic devices ranging from televisions and cellular phones, VCR and DVD players, to personal computers. Currently, electronic waste makes up approximately five percent of the U.S. municipal solid waste stream, and is the fastest growing category of the municipal solid waste stream.

FEC Requirements at a glance

BRONZE

- ✓ Complete Survey
 - ✓ Set Goals
- Select 1 of 3 LC Phases:
 - Procurement
 - Use
 - End-of-life
- ✓ Complete mandatory items in chosen LC phase
- ✓ Choose and implement 2 optional items
- ✓ Report progress

SILVER

- ✓ Complete Survey
 - ✓ Set Goals
- ✓ Select 2 of 3 LC Phases:
 - Procurement
 - Use
 - End-of-life
- ✓ Complete mandatory items in 2 chosen LC phases
- ✓ Choose and implement 3 optional items
- ✓ Report progress

GOLD

- ✓ Complete Survey
 - ✓ Set Goals
- ✓ Integrate 3 LC Phases:
 - Procurement
 - Use
 - End-of-life
- ✓ Complete mandatory items in all 3 LC phases
- ✓ Choose and implement 4 optional items
- ✓ Report progress
- ✓ Mentor 2 others



What Benefits do Partners receive?

- Recognition for their leadership
- Reduced regulatory liabilities
- Educational training and feedback
- Networking
- Cost effective tools
- Money saving strategies
- Strategies to ensure data security



FEC and EO13148

- Enhances Communication & Management
 - within facility
 - Procurement
 - EHS managers
 - IT managers
 - Facilities/property managers
- Compliance with Environmental Requirements
 - Pollution Prevention
 - Environmentally responsible purchasing decisions
 - Efficient use and conservation of energy and materials
 - Hazardous Waste
 - Environmentally responsible recycling of electronics



FEC and EMS: a Natural Fit

- Electronics are likely to have significant environmental impacts for most federal facilities
- Gives FEC Partners staff support and framework for the work they'll be doing
- Helps agencies & individual facilities meet Electronics Stewardship MOU, FEC, and EO 13148 goals



EMS Significant Aspect

		Consumption of toxic and hazardous chemicals	Excess property management	Solid and hazardous waste generation	Energy use
F E C G O A L	Purchase environmentally preferable electronic equipment and services	Purchase electronics with reduced hazardous content	Use a recycling contractor that does not send un-processed non-reusable equipment overseas	Require reduced product packaging in purchasing specifications	Ensure that at least 50% of all monitors purchased are Energy Star compliant
	Reduce impacts of electronic products during use	Demonstrate that 25% of electronic equipment is reused or refurbished within or outside your agency	Establish and maintain a system for property accountability of electronics from desktop to disposition	Store all surplus equipment properly prior to transfer and properly package equipment to minimize breakage during transfer	Establish a policy to power off PCs when agency employees leave
	Manage obsolete electronics in an environmentally safe way	Require that manufacturers take back equipment	Reduce the number of electronics retired by 30% by establishing a policy to test equipment for software upgrades versus replacement before hardware is retired	Require vendors providing recycling and reuse services to minimize land disposal and incineration to the greatest extent possible	Develop and maintain a system to monitor the property under your control to ensure maximum use



FEC EMS Tools

- *EMS and the FEC: What's the Connection?*
 - Q&A document explaining the link and providing examples of how EMS objectives can be met by implementing FEC activities
- FEC/EMS Electronics Module
 - walks through an EMS program and how to incorporate electronics with links to FEC tools
- FEC Web Site EMS Page
<http://www.federalelectronicschallenge.net/ems.htm>



EPA Region 3 EMS and FEC

Performance Indicators

Energy Use and End of Life Issues

- ✓ Monitor sleep mode installed in 2003
- ✓ Buying only Energy Star Computers
- ✓ Buying only LCD to replace old or broken CRT
- ✓ Donated used equipment
- ✓ Occupant training

Paper Use / Paper Waste associated with use

- ✓ Default double side copying
- ✓ Buying duplex or 2-sided capable printers
- ✓ 100% recycled fiber in paper paper

Roles and Responsibilities

EMS Team, IT, Contracts, Facilities and Purchasing



Summary on the FEC

- **Flexible**
 - Facility determines level of commitment
 - Facility sets goals, and focus
- **Recognition** - for all participants
 - Bronze, Silver, Gold
- **Integration**
 - Acquisition & Procurement, Operations & Maintenance, End-of-Life
- **Voluntary**



To Do List

- Research FEC BMP and compare to our management
- Look into how FEC and our EMS goals mesh
- Make sure management knows about FEC MOU and possible awards and recognition
- Champion our facility joining the FEC!



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