EPA’S Work Related to Design, Procurement & Use, and End- of- life Management of Electronics

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According to the Consumer electronics association, Americans own some two billion electronic products- about 25 products per household.

Approximately two million tons of used electronics, including computers and televisions, are discarded nationally each year.

Many products currently in use that will need to be managed in the future contain substances of concern such as lead, mercury and cadmium. For example older cathode ray tubes in TVs and PCs contain an average of 4 Lbs. of lead.
EPA’s management focus

- To foster environmentally conscious design and manufacturing
- To increase purchasing and use of more environmentally sustainable electronic products
- Increase safe, environmentally sound reuse and recycling of used electronics
Fostering environmentally conscious design and manufacturing

- electronic product environmental assessment tool (EPEAT)
- Design for the Environment (DfE) program
- Grant Activities
Fostering environmentally conscious design and manufacturing via Electronic Product Environmental Assessment Tool (EPEAT)

- EPEAT is an environmental procurement tool designed to help institutional purchasers in the public and private sectors evaluate, compare and select desktop computers, laptops and monitors based on their environmental attributes. The EPEAT rating system initially will address computers – desktops and laptops – and monitors. This scope may be expanded in the future.

[www.epeat.net](http://www.epeat.net)
EPEAT-To Measure Performance in Eight Areas

- Reduction/Elimination of Environmentally Sensitive Materials
- Materials Selection
- Design for End of Life
- Life Cycle Extension
- Energy Conservation
- End of Life Management
- Corporate Performance
- Packaging
Fostering environmentally conscious design and manufacturing via Design for the Environment Program (DfE)

- OPPT's DfE program is one of EPA's premier partnership programs, working with individual industry sectors to compare and improve the performance and human health and environmental risks and costs of existing and alternative products, processes, and practices.

http://www.epa.gov/opptintr/dfe/projects/index.htm
DfE has completed four major assessments in connection with the electronics industry

- Two studies on Printed wiring boards
- One study on Desk top computer monitors- Cathode Ray tubes Vs. liquid crystal
Fostering environmentally conscious design and manufacturing via Grant Activities

- Region 2 is applying P2 grant funding toward greener electronics manufacture - Funds were provided to SUNY Binghamton in NY to work on the systematic elimination of lead and halides from electronics manufacturing. The grantee is also exploring opportunities to conserve other materials such as water, paper, and energy in the electronics manufacturing sector.
Increasing the purchasing and use of more environmentally sustainable electronic products

- Federal Electronics Challenge
- Energy Star
Increasing the purchasing and use of more environmentally sustainable electronic products via the FEC

- The federal government is a large purchaser of IT products. The Fed government will spend approximately $60 billion in information technology (IT) equipment and services in Fiscal Year 2005 (The federal government purchases 7% of all computers manufactured world wide). Through the FEC, there is an opportunity to provide leadership in the environmentally sound and cost effective management of electronic assets.

http://www.federalelectronicschallenge.net/
FEC - Who’s involved?

- Agriculture
- Defense
- Energy
- Health and Human Services
- Homeland Security
- Interior
- Justice
- Transportation
- Veterans Affairs
- Environmental Protection Agency
- General Services Administration
- Office of the Federal Environmental Executive
The FEC has more than 50 partners representing facilities operating by the participating federal agencies. The FEC is open to all federal agencies and facilities. Partners may determine their own level of commitment to work in any or all of the three aspect of the electronics life cycle-acquisition, operation and use, and end of life.
Increasing the purchasing and use of more environmentally sustainable electronic products via Energy Star

- ENERGY STAR is a government-backed program helping businesses and individuals protect the environment through the use of goods that have superior energy efficiency.

http://www.energystar.gov/index.cfm?c=about.ab_index
Energy Star in Home Electronics Products

- The products: cordless phones, combination units, DVD products, external power adapters, home audio systems, televisions, and VCRs.
Energy Star in Office Equipment

- The products: printers, scanners, water coolers, multifunction devices, computers, copiers, external power adapters, FAX machines, laptops, mailing machines, and monitors.
Increase safe, environmentally sound reuse and recycling of used electronics

- Plug into ecycling
- Recycling Electronics and Asset Disposition
- EPA Grants
- CRT Rule
Increase safe, environmentally sound reuse and recycling of used electronics via Plug into ecycling

Plug into ecycling - Plug-In To eCycling is a consumer electronics campaign launched in 2003 working to increase the number of electronic devices collected and safely recycled in the United States through:

- Providing the public with information about electronics recycling and increasing opportunities to safely recycle old electronics.
- Facilitating partnerships with communities, electronics manufacturers, and retailers to promote shared responsibility for safe electronics recycling.
- Establishing pilot projects to test innovative approaches to safe electronics recycling.

http://www.epa.gov/epaoswer/osw/conserve/plugin/
Plug into e-cycling Examples

- Staples New England Pilot: in-store collection, reverse-logistics to distribution center, no fee, manufacturer assistance to pay for processing, IT equipment only. Results: over 115,000 lbs. collected;

- Office Depot partnered with HP: nationwide in-store collection for a limited time period, no fee, HP processing all recycling, IT equipment and small TVs. Results: over 10.5 million lbs. collected, more than 441 tractor trailer loads;

- Best Buy pilot project collecting used electronics in retail stores. Through their combined efforts with local recyclers, over 350,000 pounds of older electronics were collected in store parking lots at six events throughout Minnesota.
End of Life Management

- Federal Government disposes approximately 10,000 computers every week
Increase safe, environmentally sound reuse and recycling of used electronics via Recycling Electronics and Asset Disposition (READ) Program

Under Recycling Electronics and Asset Disposition (READ) services, EPA has awarded seven Government Wide Acquisition Contracts (GWACs) to small businesses. The contractors are:

- Molam International, Marietta, Ga.;
- Supply Chain Services, Lombard, ILL.;
- Asset Recovery Corporation, St. Paul, Minn.;
- Hesstech LLC, Edison, N.J.;
- Liquidity Services Inc., Washington, D.C.;
- Global Investment Recovery, Tampa, Fla.;
- Hobi International, Batavia, ILL.

http://www.epa.gov/oamhpod1/admin_placement/0300115/fact.htm
READ-Elements of the Program

- Refurbish and resell the electronics, using the proceeds to offset costs;
- donate them to charitable causes;
- recycle as much as possible; and
- properly dispose of the remainder.
Increase safe, environmentally sound reuse and recycling of used electronics via Grants Activities

Grant programs in

- P2
- conservation challenge
- Solid Waste (e.g., Grants to INFORM to evaluate Cell Phone recycling)

<www.informinc.org>.
Increase safe, environmentally sound reuse and recycling of used electronics via the CRT Rule

- Cathode Ray Tube Rule - Encourages increased reuse, recycling, and better management of this waste stream. Under the proposed rule the processed glass sent for recycling would be unregulated if it went to a glass manufacturer or a lead smelter.
Some Next steps – per EPA’s National Electronics Meeting in March 2005

- Centralized Data Repository for Electronics Recycling
- Standards/Certification for Electronics Recyclers
Next Steps

- **Centralized Data Repository for Electronics Recycling** - The intended database would provide information on the status of national, state, and local e-waste initiatives, geographic summaries of regional efforts, and data on the implementation of collection and recycling programs.
Standards/Certification for Electronics Recyclers - An estimated 800 firms acquire obsolete electronics for resale and recycling nationally. In addition to these for-profit processors, several hundred non-profit organizations provide electronics refurbishment and recycling services.
For More Information ...

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