Connie Overly

Partnering with the Federal Electronics Challenge by Greening Computers One Byte at a Time

What is the Federal Electronics Challenge?

It is a partnership program that assists federal agencies and facilities to manage electronic products in an environmentally green manner.

• The FEC is managed by the EPA and the Office of Federal Environmental Executive

• FEC Program goals align with Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management"

• Targets Three Life Cycles of Electronic Products

• Acquisition and Procurement →

Electronic Products Targeted
• Desktop/laptop computers
• Computer monitors & peripherals
• Printers, fax and copy machines

• Operation and Maintenance →

Ways to Reduce Environmental Impact
• Use EPEAT/ Energy Star™ efficient products; duplex printing enabled; remote desktop solutions
• Educate employees of power management features
• Internal reuse of equipment

• End-of-life Management →

Managing Obsolete Products
• Environmentally sound disposal practices
• Recycle equipment components

Benefits of Partnering with the FEC

• Free resources for developing, implementing, and improving an electronics stewardship program

• Educational training and feedback through monthly partner calls and an annual conference

• Provides measured progress for the Office of Management and Budget Environmental Stewardship Scorecard

• Technical assistance through individual support to federal agency or facility

• Networking opportunities and knowledge-sharing with other federal partners

• Cost savings through resource efficiency, energy savings, and equipment maintenance practices

• National recognition from the Office of the Federal Environmental Executive

FEC Resources

• Regional Champions
• Website and Guidance Documents
• Partner Listserve Forum
• Annual Conference
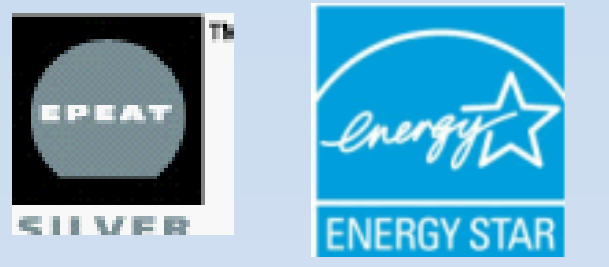• Monthly Partner Calls
• Technical Assistance Network

FEC Annual Recognition Program for Partners

Award Levels	Mandatory Activities	Optional Activities
Gold	Complete activities in **three life-cycle phases** Plus Complete two mentoring activities	Complete **nine** optional activities in any life-cycle phase(s)
Silver	Complete activities in **two life-cycle phases**	Complete **six** optional activities in any life-cycle phase(s)
Bronze	Complete activities in **one life-cycle phase**	Complete **three** optional activities in any life-cycle phase(s)

FEC Program Goals for Partners to Meet by 2010

• 95% of eligible electronic equipment purchased/leased annually by FEC Partners is EPEAT-registered.

• 100% of computers and monitors in operation have ENERGY STAR® features enabled.

• Electronic equipment in operation at FEC Partner facilities have an average life span of at least four years.

• 100% percent of non-reusable electronic equipment disposed of annually is recycled using environmentally sound management, as defined by EPA's Plug-In to eCycling guidance.

Federal Electronics Challenge
http://www.federalelectronicschallenge.net

NREL Contacts
Federal Electronics Challenge (FEC)
Denise Rayborn - denise_rayborn@nrel.gov
Peter Hathaway - peter_hathaway@nrel.gov

Sustainable NREL
Robert Westby - robert_westby@nrel.gov

Environmental Management System
Denise Rayborn - denise_rayborn@nrel.gov

Warren Gretz/PIX06201

NREL Accomplishments for 2008 Silver Award

Several Activities Practiced Before Joining the FEC

MANDATORY ACTIVITIES

COMPLETED 2 of 3 REQUIRED LIFE CYCLES

ACQUISITION & PROCUREMENT

1. Complete the FEC Acquisition and Procurement Checklist for the Silver award level.
2. Procurement policies require environmentally preferable electronic products.
3. Procurement policies require EPEAT-registered Silver or better electronics.
4. 95% percent of computer desktops, laptops and monitors purchased or leased are EPEAT (Silver or better) registered products.
5. 75% of all printers, copiers, and fax machines purchased or leased are certified under an eco-label program.

OPERATION & MAINTENANCE

6. NREL's Environmental Management System (EMS) addresses electronics stewardship.
7. Establish and promote policy and guidance for Information Technology Asset Management
8. Policy and guidance established for monitor and computer power management. Policy addresses exceptions for sensitive equipment
9. 100% of computer monitors have ENERGY STAR "Sleep" enabled. Exemptions are outlined in a power management policy.
10. Conduct employee training on energy conservation for electronics. Include policy information for monitor and personal computer power management.

END-OF-LIFE MANAGEMENT MANDATORY ACTIVITIES

11. Policy established requiring environmentally sound electronic equipment disposal at end of life.
12. Policy established to promote internal reuse, donation through Computers for Learning, federal government reuse, and donation to States or non-profits (in that order) as disposition methods for electronic equipment at the end of its first life.
13. Use a third-party certified recycler.

OPTIONAL ACTIVITIES

COMPLETED 10 of 6 REQUIRED ACTIVITIES

ACQUISITION & PROCUREMENT

1. Establish and promote a policy, directive, memorandum and/or guidance addressing the use of total cost of ownership analysis to assist in selecting information technology products and services.
2. Complete an assessment that compares the advantages and disadvantages of purchasing new electronics versus one or more alternatives (e.g., leasing, internal reuse, upgrading equipment, purchasing services instead of products).
3. Require vendors to take back all electronic product packaging or specify EPEAT-registered products that meet optional criteria for packaging take-back.
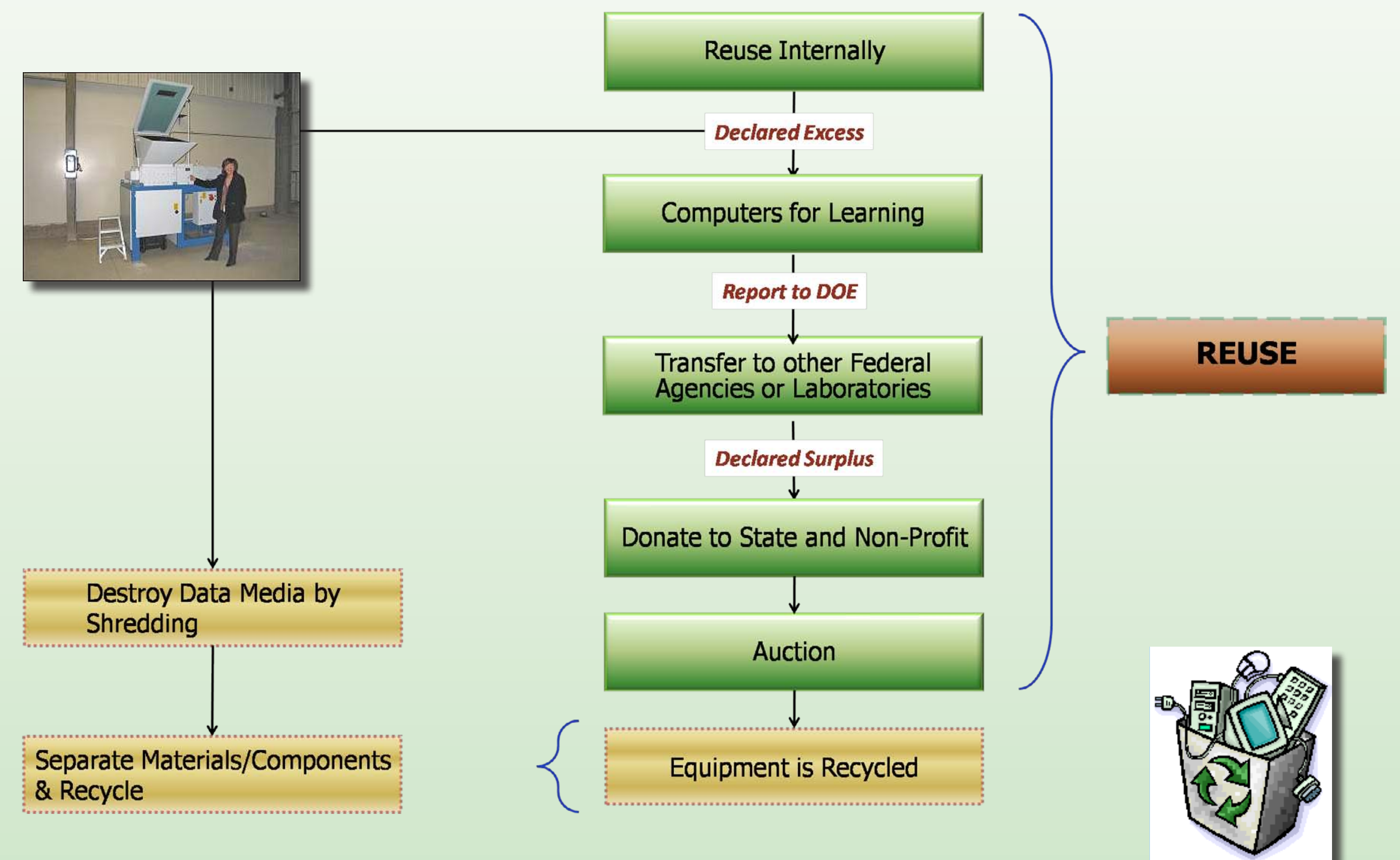
OPERATION & MAINTENANCE

4. Establish and promote policy to use duplex printing and copying.
5. Establish and promote policy, directive, and memorandum to turn off PCs when employees leave for the day.
6. Utilize a centralized system to install/upgrade/repair software.
7. Develop/Purchase and utilize a system to automatically enable duplex printing and/or copying.

END-OF-LIFE MANAGEMENT MANDATORY ACTIVITIES

8. Establish and promote a policy, directive, memorandum and/or guidance for media sanitization.
9. Implement an employee personal computer collection/recycling program.
10. 100% of used hard drives that leave your organization (either as part of a computer or as a separate component) go through a media sanitization or destruction process.

End-of-Life Management Program at NREL

Reuse Internally
Declared Excess
Computers for Learning
Report to DOE
Transfer to other Federal Agencies or Laboratories
Declared Surplus
Donate to State and Non-Profit
Auction
REUSE

Destroy Data Media by Shredding
Separate Materials/Components & Recycle
Equipment is Recycled

Sustainable NREL Project & Program Awards

• Colorado's Environmental Leaders Partnership Gold Level EMS
• Climate Leaders member
• Federal Electronics Challenge Silver-level Award
• LEED® Certified Platinum Laboratory

S&TF LEED® Platinum Certification

• Notable features
• Aggressive energy use reduction design--38% less energy use than ASHRAE Standard 90.I (1999)
• 100% daylighting for ambient lighting is all office areas and 50% daylighting for ambient lighting in most labs
• Construction waste management (75% waste recycled)

Why did NREL join the FEC?

• Meet E.O.C. 13423
• Support DOE Order 450.1A
• Contract with DOE for Environmental Stewardship
• Best Practice for Environmental Management and Sustainable NREL
• Promotion of Green Computing at NREL
• Recognition from Office of the Federal Environmental Executive (OFEE)

NREL is Going for Gold Award in 2009

In addition to 2008 Accomplishments:

• Track data for life-cycle management and reporting on all life-cycle phases.
• CRT monitors for office use no longer purchased and replaced with LCD monitors
• Out of service CRT monitors disposed in an environmentally friendly manner
• 95% of computer/monitors purchased rated EPEAT Silver or better, resulting in increased energy savings
• Mentor an FEC Facility partner or candidate facility
• Working towards the Gold FEC Award

Patrick Corkery/PIX14916