Greening the Computer Lifecycle: the State Electronics Challenge

www.stateelectronicschallenge.net

What is the State Electronics Challenge?

- Voluntary & *free* partnership program targeted to state, regional, local, & tribal government
- Addresses how government buys, uses, & recycles their computer equipment.
- Promotes lifecycle stewardship of computers
  - Purchasing green computers
  - Use
    - Power management
    - Extending product life
    - Decreasing paper usage
  - Reuse & responsible recycling

What Does the Challenge Offer?

- Action plan to achieve proven results

- Free assistance & technical resources

- Tools to track progress & measure results

- Individualized reports on your environmental accomplishments

- Recognition
  - Including for what you're already doing

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Background

- Adapted Federal Electronics Challenge (FEC)

- Piloted in Northeast with funding from EPA Region 2—Fall 2007

- Currently 63 Partners in 23 states
    - 2 states – Maine & NH
    - State environmental agencies
    - Cities, counties, solid waste districts
    - Colleges, universities, school districts

Background (Continued)

- Funded by
  - EPA grants: Great Lakes Restoration Initiative & Region 8
  - Private sector sponsors:
    Consumer Electronics Association, ISRI, Panasonic, Samsung, Sims Recycling Solutions
- Managed & staffed by Northeast Recycling Council (NERC)

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5

Current SEC Partners

63 Partners
• 3 in EPA Region 4

Recent national expansion

6

Why Focus on Computers?

Impact from mining through end-of-life

- Energy consumption – production & use

- Toxic constituents – e.g., lead, mercury, cadmium

- Valuable resources – e.g., copper, precious metals, rare earths, "conflict metals," plastic, steel, aluminum

.....Bottom line: greening lifecycle saves energy & resources & reduces toxics

Why Challenge the Public Sector?

- State & local government purchasing - $35 billion+ technology equipment annually

- Environmental benefits & sustainability goals

- Cost savings

- Leadership

Environmental Benefits

For every 1,000 "green" computer systems purchased & units recycled:

⬇ Energy use = to power 105 homes/year

⬇ Greenhouse gases = 113 fewer cars/year

⬇ Municipal solid waste by ~ 40 tons = waste from 18 households/year

⬇ Hazardous waste by 19 tons

⬇ Toxic materials, including lead & mercury by 164 pounds

Cost Savings

$25 - $75 per computer system/year by activating power management features

A recent study showed PCs are "on" more than 90% of the time!

QDI Strategies, Oct. 2010

10

Partner Requirements

- Register
- Complete *Baseline Survey of Current Practices*
- Choose your focus - any or all lifecycle phases
  - Purchasing
  - Use & Operations
  - End-of-life
- Implement program requirements for lifecycle phase(s)
- Report annual progress
- Apply for recognition (optional)

11

Program Requirements
Procurement

- Modify procurement practices to require/give preference to "green" computers – defined by EPEAT® standard

- Ensure 95% of desktops, laptops, monitors EPEAT registered

12

Overview of EPEAT

- Voluntary environmental performance standard for computer desktops, monitors, & notebooks
  - Addresses multiple environmental attributes
  - Three-tier rating system: bronze, silver, & gold
- System for identifying products
  - Searchable product registry (www.epeat.net)
  - 2,400 + products & 34 manufacturers
- Verification process to ensure conformance

EPEAT Performance Categories
Total: 23 required & 28 optional criteria

- Reduction of Toxic Constituents
- Materials Selection
- Product Longevity/Lifecycle Extension
- Design for End-of-Life
- Energy Conservation
- End-of-Life Management
- Corporate Performance
- Packaging

Program Requirements
Operations & Maintenance

- Establish & promote policy/directive for:
  - Power management
  - Reducing paper consumption
- Ensure ENERGY STAR "sleep" function enabled
- Ensure double-sided printing features are used on 75% of printers & copiers

Program Requirements
End-of-Life Management

- Establish policy/directive:
  - Require environmentally sound management (ESM)
  - Promote reuse & donation
- Track units reused internally, donated, recycled
- Use recycler that has 3rd party certification
  - R2 or e-Steward

16

SEC Tools to Get the Job Done

- Online resources

  www.StateElectronicsChallenge.net

- Free one-on-one technical assistance

- Partner-only Webinars, e.g.
  – Responsible End-of-Life Recycling – April 28
  – Green Procurement
  – Power Management

- Partner-only Listserv

www.StateElectronicsChallenge.net

Track Progress & Measure Results

- Partners submit:
  - Baseline Survey of Current Practices
  - Annual Reporting Form
- NERC commits to:
  - Calculate environmental benefits of Partner activities
  - Prepare environmental benefits report

Sample Benefits

Reduction In	Purchasing EPEAT® Products	Operations & Maintenance	Equipment Reuse & Recycling	TOTAL BENEFITS	
	How Much			How Much	Equivalent To
Energy use	1.5 million kWh	3.3 million kWh	21.6 million kWh	26.4 million kWh	Electricity to power 2,211 households/year
Greenhouse gas emissions	279 metric tons of carbon equivalents	631 metric tons of carbon equivalents	1,170 metric tons of carbon equivalents	2,080 metric tons of carbon equivalents	Removing 1,399 cars from the road/year
Toxic materials, including lead & mercury	343 lbs	463 lbs	474 lbs	1,280 lbs	
Municipal solid waste	6,849 lbs	123,259 lbs	235,935 lbs	366,043 lbs	Waste generated by 83 households annually
Hazardous waste	13,424 lbs	9,768 lbs	43,659 lbs	66,851 lbs	

Recognition

- Eligible for:
  - ■ Gold: **All three** lifecycle phases
  - ■ Silver: **Two of three** lifecycle phases
  - ■ Bronze: **One of three** lifecycle phases

- Achievements recognized
  - — Award
  - — The media
  - — SEC Website

Why Participate?

- Environmental benefit, including climate change & sustainability goals

- Demonstrating leadership

- Cost savings

- Tools & support provided

- Recognition for your accomplishments
  - Including what you're already doing!

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22

How Much Work will it Take?

- Depends on the Partner

- What you choose to work on & how much progress you've already made in that area

- Depends on the people
  - Who's on the team (or is there a team?)
  - Who you need to enlist to help out

- It's up to you!

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How Much will this Cost?

- "Nothing!" The SEC is free:
  - No cost to join
  - No cost for technical assistance & support
  - No obligation on your part
- What the SEC *does not* pay for is the cost of implementation. E.g.,
  - Buying power management software
  - Paying for recycling

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