



Greening the Computer Lifecycle: the State Electronics Challenge

www.stateelectronicschallenge.net



What is the State Electronics Challenge?

- Voluntary & *free* partnership program for state, regional, local, & tribal government
- 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



Background

- Adapted Federal Electronics Challenge (FEC)
- Piloted in Northeast with funding from EPA Region 2—Fall 2007
- Currently 46 Partners in 16 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)



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



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)



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



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)
 - 2,200 + products & 32 manufacturers
- Verification process to ensure conformance



Program Requirements

Operations & Maintenance

- Establish & promote policy/directive for:
 - Power management
 - Reducing paper consumption
- Ensure ENERGY STAR “sleep” function enabled
- Promote power management - policy makers, IT staff, & users



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



SEC Tools to Get the Job Done

- Online resources

www.StateElectronicsChallenge.net

- Free one-on-one technical assistance
- Partner-only Webinars, e.g.
 - Power Management
 - Printers
 - Responsible End-of-Life Recycling
 - Green Procurement
- Partner-only Listserv



SEC is administered by the Northeast Recycling Council, Inc.

► Home

► About SEC

- [Fact Sheet](#)
- [Why Join?](#)
- [Becoming a Partner](#)
- [Current Partners](#)
 - [2008-2009 Combined Results](#)
 - [2009 Environmental Results](#)
- [SEC Sponsors](#)
- [Become a Sponsor](#)

► Join SEC

► Program Requirements

State Electronics Challenge

Collectively, state and local government purchase more than \$35 billion worth of technology equipment annually*, and has the opportunity to provide leadership in the environmentally sound and cost effective management of electronic assets.

The State Electronics Challenge (SEC) is a voluntary program that encourages state, regional, and local governments, including schools and other public entities, to:

- Purchase greener electronic products.
- Reduce the impacts of electronic products during use.
- Manage obsolete electronics in an environmentally safe way.

The SEC provides resources to help state, local, and regional government and agencies to become leaders and face the new challenges posed by the electronics waste stream.

The SEC is modeled after the very successful [Federal Electronics Challenge \(FEC\)](#)

Quick Links/News

The Challenge Goes National

The SEC is now open to government entities around the country! Thanks to the support of the Challenge Sponsors we are able to offer this free program nationally.



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

Measure	How Much	Equivalent To
Energy usage reduced	9.5 million kWh	Electricity to power 794 households/year
Greenhouse gases avoided	1,798 metric tons carbon equivalents	Removing 1,207 cars from the road/year
Municipal solid waste avoided	7,460 lbs	Waste generated by 1.7 household/ year
Toxics reduced	183 lbs	
Hazardous wastes avoided	8,577 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
 - Presentations



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!



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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