SEC

STATE ELECTRONICS CHALLENGE

Annual Report for Sponsors

May 2013

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Introduction

Thanks to the ongoing support of the State Electronics Challenge Sponsors, the program has grown significantly in the past twelve months. This report covers the period May 1, 2012 – April 30, 2013, and chronicles the Challenge's efforts and successes during this period.

Background

The State Electronics Challenge is a voluntary program that encourages state, tribal, regional, and local governments, including schools, colleges, universities, libraries, and other public entities to:

- Purchase EPEAT® registered products
- Reduce the impacts of office equipment during use
- Manage obsolete office equipment in an environmentally safe way

Government agencies and organizations participate as "Partners" in the program. The State Electronics Challenge, or "Challenge," provides Partners with free resources and technical assistance for improving electronic office equipment asset management practices, and offers annual recognition to Partners that achieve specific goals.

The Challenge was originally created through a U.S. EPA grant to the Northeast Recycling Council, Inc., in 2006, to develop and pilot a program for states that was modeled upon the Federal Electronics Challenge, and focused on computers and monitors. The State Electronics Challenge was launched and piloted in 10 Northeast states beginning in October 2007. The initial grant was followed by grants from EPA Region 8 to support the Challenge in that region, and most recently by an EPA Great Lakes Restoration Initiative grant for the eight Great Lake States. In conjunction with the support of the Challenge Sponsors the program was launched as a national program in January 2011. As such, the Challenge has been available in all states for two years. In the fall of 2012 the Challenge expanded its focus area from just computers and monitors to include imaging equipment; such as copiers, printers, and multi-function devices. This was coincident with an expansion of the EPEAT program.

Tracking the Challenge & Its Success

There are several metrics that the Challenge tracks that help to define the success of the program. These include:

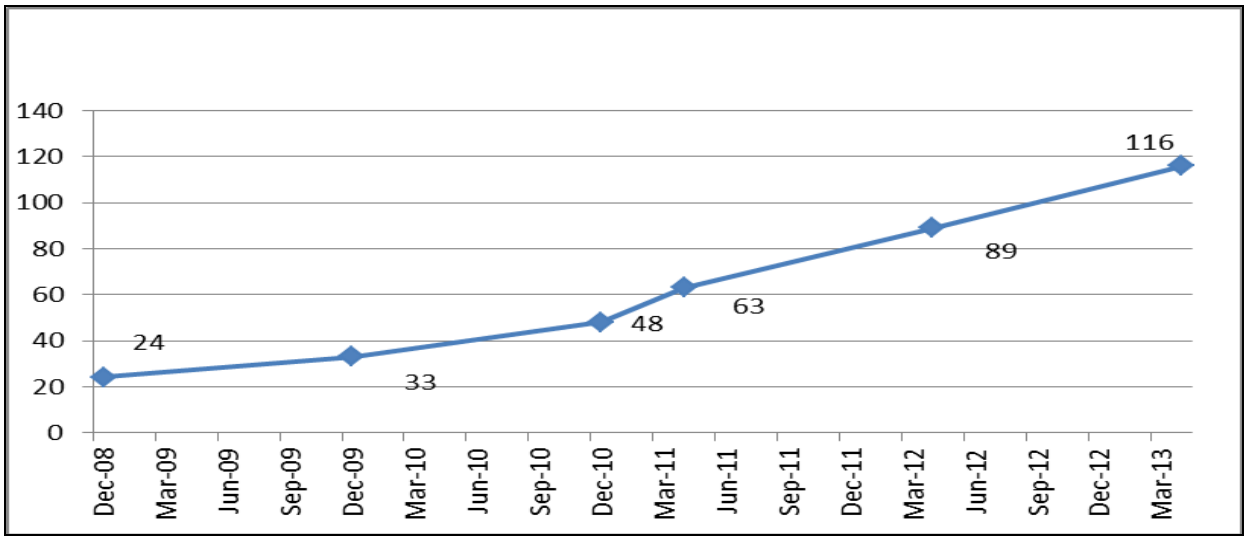
- Number of Partners, or government entities that have signed on to "green" the lifecycle of their office equipment assets
- Number of Partner employees; which is an indicator of the number of computers purchased and managed by Partners
- Environmental results of Partner activities under the program
- Partner awards for accomplishments
- Number of EPEAT registered devices purchased
- Amount of material recycled and reused
- Average life in service, power management, and paper reduction
- Activities by Challenge staff in support of the program
- Funding to support the Challenge

The results of each of these are detailed below.

Number of Partners

In the past year the Challenge grew from 89 Partners in 31 states at the end of April 2012 to 116 Partners in 36 states at the end of April 2013 – a 30% increase in the number of Partners. Graph 1 shows the growth in the number of Partners since 2008. We are also delighted that in 2012, the first Tribal Nation became a Partner: Mille lacs Band of Ojibwe Indians.

Graph 1: Number of Partners, December 2008 - April 2013

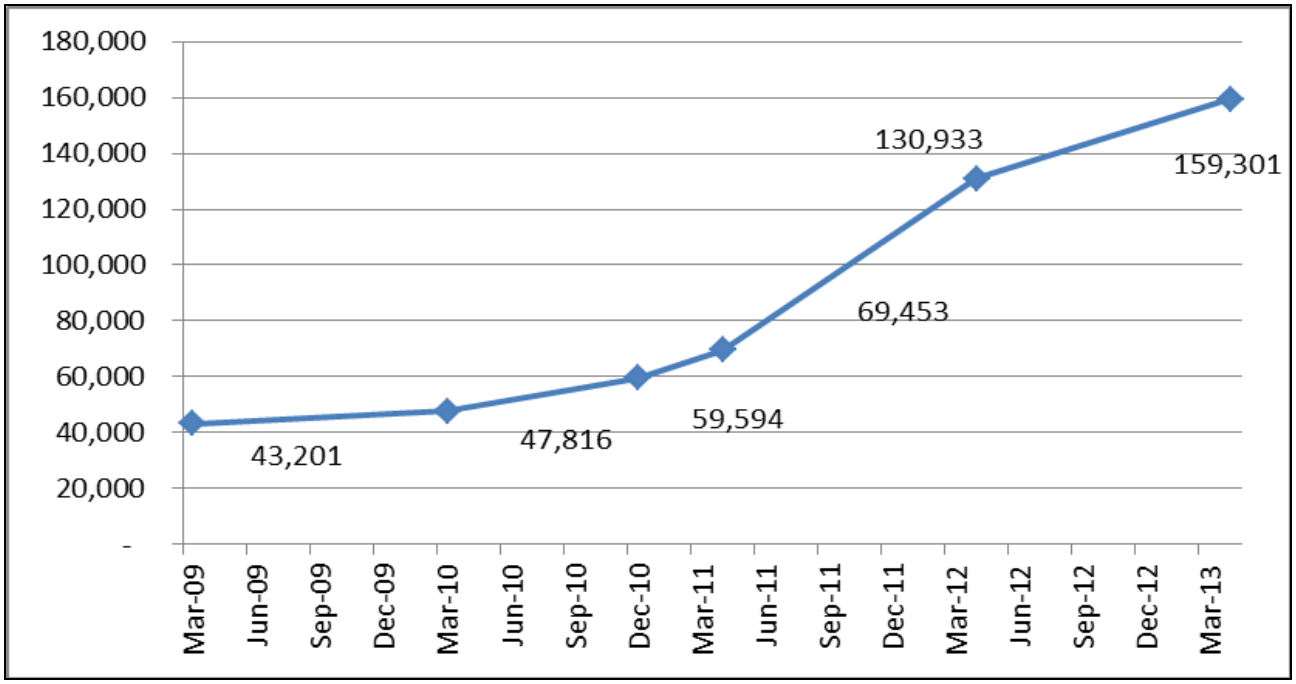


Number of Employees

The number of people employed by Challenge Partners is an estimate of the number of computers that are likely under the control of the Partner, and therefore, represent the scale of potential environmental impact – good or bad – of the Partner resulting from its decisions about purchasing, use, and disposition of office equipment assets.

Graph 2 depicts the growth of the Challenge based on the number of employees within Partner organizations. At the end of April 2013, the total number of computers in Partner organizations was almost 160,000, based upon the number of employees; a 22% increase from last year.

Graph 2: Number of Employees, March 2009 - April 2013



Environmental Results

In January of each year, Partners are asked to submit data documenting their activities in the program for the calendar year that just concluded. This information includes:

- EPEAT purchases
- Reuse by unit
- Recycling by unit or total weight
- Average equipment life
- Equipment power managed
- Paper conserved
- They are also asked if they used certified electronics recyclers, and if answering yes, to identify that recycler

Forty-two Partners, or 43 percent of participating organizations at the end of 2012, submitted data to the Challenge for calendar year 2012. This data is used to calculate the environmental benefits of the Challenge resulting from Partner activities.

Table 1 summarizes the number of EPEAT[1] registered products reported as purchased in 2012, the EPEAT recognition level (Bronze, Silver, Gold), as well as material reused and recycled. Table 2 summarizes the power management, average lifespan of equipment in service, and paper conservation efforts of Partners.

Table 1: 2012 Data Reported by Partners for Computer & Monitor Purchases[2], Reuse, & Recycling[3]

Products Purchased	Desktop Computers	LCD Monitors	Notebook Computers	CRT Monitors
EPEAT Bronze	121	121	61	0
EPEAT Silver	231	351	98	0
EPEAT Gold	4,654	4,660	2,934	0
Total Purchased	5,006	5,132	3,093	0
Reused (units)	5,338	2,785	1,472	119
Recycled (units)	3,814	1,037	707	3,352
Recycled (lbs.)	+ 528,724 lbs. of mixed office equipment + 1,070 cell phones			

Table 2: Average Results Reported by Partners for Computers in Service, 2008 - 2012[4]

		2008	2009	2010	2011	2012
Power management enabled	Computers	59%	51%	73%	81%	83%
	Monitors	68%	86%	95%	86%	89%
Average equipment lifespan (months)		62	61	63	58	61
Paper reduction (reams of paper)[5]		N/A	N/A	N/A	10,779	7,316

[1] Electronic Product Environmental Assessment Tool.
[2] The program does not draw a distinction between leasing or purchasing.
[3] Reported in units; recycling is reported in units for computers and monitors with the option to also report the weight of mixed office equipment recycled.
[4] The data in this table should not be considered to reflect trends. Rather, it reflects the practices of the Partners that reported in that calendar year.
[5] Reporting on paper reductions began for calendar year 2010.

Table 3 shows the total EPEAT purchasing, reuse and recycling over the history of the Challenge.

Table 3: Data Reported by Partners for Computer & Monitor Purchases, Reuse, & Recycling, 2008 – 2012

Products Purchased	Desktop Computers	LCD Monitors	Notebook Computers	CRT Monitors
EPEAT Bronze	121	150	101	0
EPEAT Silver	1,892	3,260	4,385	0
EPEAT Gold	18,915	16,260	9,083	0
Total Purchased	20,928	19,670	13,569	0
Reused (units)	13,505	4,438	18,561	1,501
Recycled (units)	16,452	3,845	13,692	3,696
Recycled (lbs.)	+ 1.2 million lbs. of mixed office equipment + 1,773 cell phones			

Table 4 summarizes the aggregate environmental benefits resulting from Partners' efforts in 2012 to "green" the lifecycle of their computer assets. The data provided by Partners is analyzed using the Electronics Environmental Benefits Calculator—a tool created under EPA's auspices.[6]

[6] Calculations made using Version 2.0, dated 3-2-09, available at http://www.federalelectronicschallenge.net/resources/bencalc.htm

Table 4: 2012 Partner Environmental Benefits

	Purchasing EPEAT® Products	Use	Equipment Reuse & Recycling	TOTAL BENEFITS	
Reduction In	**How Much?**			**Total**	**Equivalent To**
Energy use	3.85 million kWh	50.27 million kWh	35.67 million kWh	89.79 million kWh	Electricity to power 7,051 households/ year
Greenhouse gas emissions	645 metric tons of carbon equivalents	9,477 metric tons of carbon equivalents	5,928 metric tons of carbon equivalent	16,050 metric tons of carbon equivalents	Removing 11,639 cars from the road/year
Toxic materials, including lead & mercury	885 lbs.	2,029 lbs.	766 lbs.	3,680 lbs.	Weight of 817 bricks
Municipal solid waste	57 tons	301 tons	493 tons	851 tons	Waste generated by 415 households/year
Hazardous waste	12 tons	32 tons	104 tons	148 tons	Weight of 1,088 refrigerators

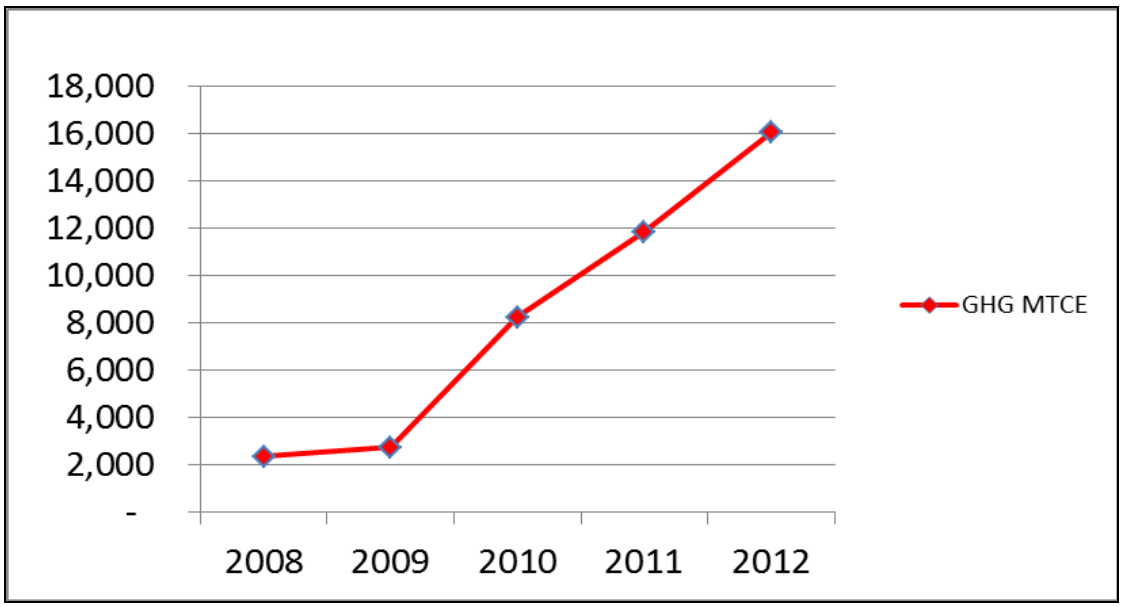
Table 5 shows the environmental results over the entire term of the Challenge: 2008 – 2012. This data is also presented graphically in Graphs 3, 4, and 5.

Table 5: Total Environmental Benefits, 2008 – 2012[7]

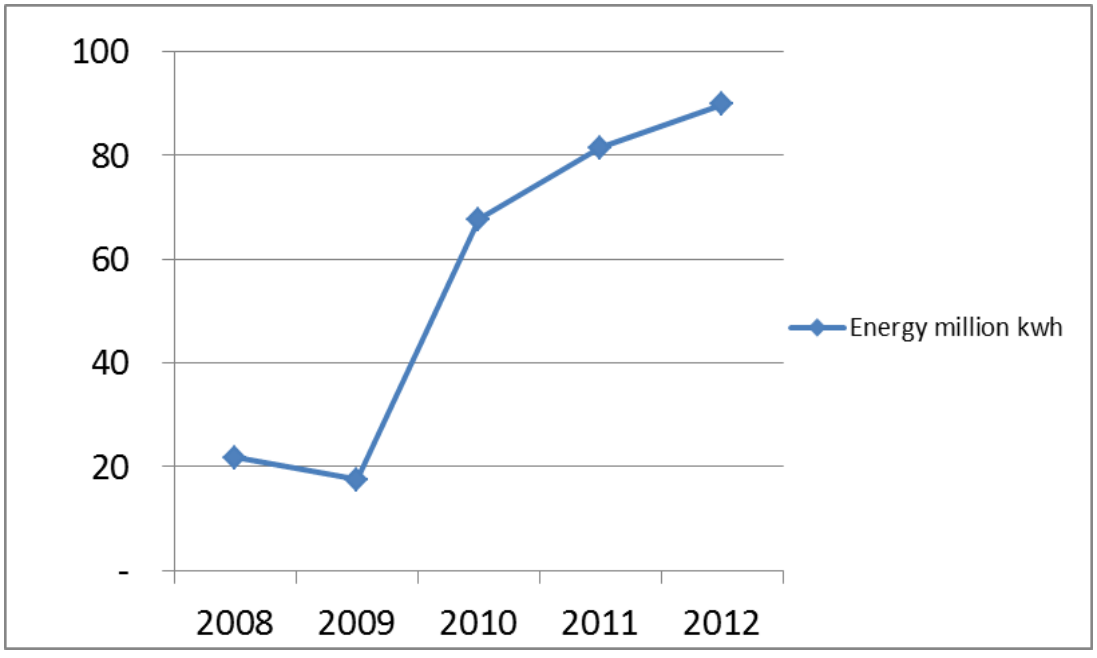
Reduction In	How Much?	Equivalent To
Energy use	278 million kWh	Electricity to power 22,821 households/year
Greenhouse gas emissions	41,198 metric tons of carbon equivalents	Removing 28,528 cars from the road/year
Toxic materials, including lead & mercury	11,170 pounds	Weight of 2,482 bricks
Municipal solid waste	2,636 tons	Waste generated by 1,224 households/year
Hazardous waste	667 tons	Weight of 4,904 refrigerators

[7] Calculations were made using Version 2.0 of the Electronics Environmental Benefits Calculator, dated 3-2-09, for 2008 – 2011, and Version 3.1, dated July 2012, for 2012 available at http://www.epa.gov/fec/publications.html#calculator. Calculations for paper reduction were made using the WARM model conversion factors, http://www.epa.gov/climatechange/wycd/waste/downloads/Paper%20Products.pdf, February 2012.

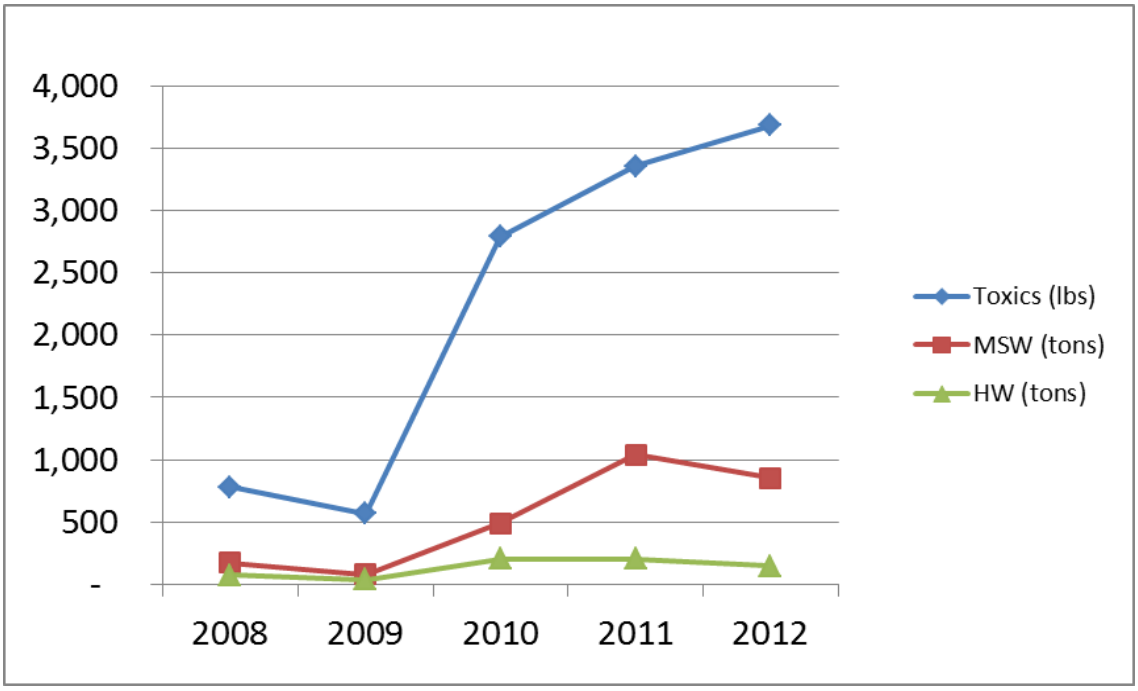
Graph 3: Greenhouse Gas Reductions in MTCE, 2008 - 2012



Graph 4: Energy Reductions in Million kWh, 2008 – 2012



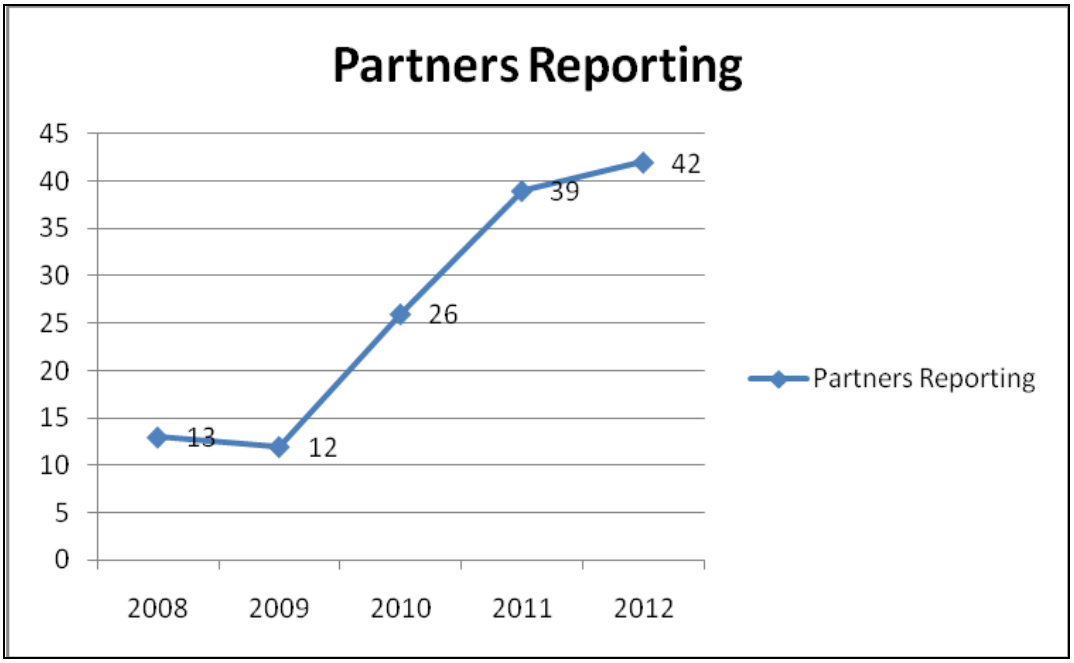
Graph 5: Reduction in Toxic Materials (lbs.), Municipal Solid Waste (MSW) (tons) & Hazardous Waste (HW) (tons), 2008 - 2012[8]



These impressive accomplishments are the result of 132 Partner reports over a four year period. For the past four years, we have seen an increase in the percentage of Partners reporting their activities. Graph 6 demonstrates that growth. After the reporting period for 2012 closed, we significantly streamlined and updated the reporting form and anticipate that this will encourage additional reporting for 2013.

[8] The decrease in solid waste and hazardous waste benefits is due to changes in the environmental benefits calculator assumptions. The total number of EPEAT units purchased, reused and recycled actually increased compared to 2011.

Graph 6: Number of Partners Reporting, 2008 – 2012



Partner Awards

In 2012, nine Partners were recognized by the SEC for their outstanding work in electronics stewardship. SEC Partners were eligible for one of three recognition levels – Bronze, Silver, or Gold – based upon completion of SEC program requirements.

As shown in Table 6, five Partners achieved Gold level status for successful implementation of all the program requirements for all three of the lifecycles. Two Partners were recognized with Silver level awards, and two more for Bronze level awards for their accomplishments. Award recipients receive a plaque as well as a press release for their use.

After five years, it is still evident that Partners most frequently meet the requirements for purchasing and end-of-life management, while use, with its power management requirements, remains the most difficult of all SEC program requirements.

Table 6: Awards 2012

Partner	Award Level	Lifecycle Phases Program Requirements Completed
City of Corvallis, Oregon	Gold	Purchasing, Use, & End-of-Life Management
City of Providence, Rhode Island, School Department	Gold	Purchasing, Use, & End-of-Life Management
DuPage County, Illinois	Gold	Purchasing, Use, & End-of-Life Management
Manitou Springs School District, Colorado	Gold	Purchasing, Use, & End-of-Life Management
Regional Technology Cooperative, Borough of State College, Pennsylvania	Gold	Purchasing, Use, & End-of-Life Management
City of La Crosse, Wisconsin	Silver	Purchasing & End-of-Life Management
Vermont Agency of Natural Resources	Silver	Purchasing & End-of-Life Management
City of Tacoma, Washington	Bronze	Purchasing
Ohio Environmental Protection Agency	Bronze	Purchasing

Activities Supported by Challenge Sponsors

Sponsorship support is critical to the success of the State Electronics Challenge. It enables the program to be offered nationally and to sustain and support the efforts of Partners as they implement change within their organizations. The following provides a snapshot of how sponsor funds were used between May 2012 and April 2013.

- **Program Promotion & Partner Recruitment**

Challenge staff and consultants made 18 presentations during this period; both at events and by webinar. We offered five national introductory webinars, which cumulatively had more than 370 participants. We are currently promoting an introductory webinar for May 2013 and a Partner-only webinar also in May on responsible e-scrap recycling. Robin Ingenthron from Good Point Recycling and Kris Murphy from Metech will be presenting.

Presentations about the Challenge were made at state, regional, and national conferences in Wisconsin, Indiana, New York, Illinois, Montana, and Minnesota. We have succeeded in securing speaking opportunities in May 2013 for Maine Resource Recovery Association, Virginia Recycling Association, and the NYSAR Federation Conference in May, and the NIGP: The Institute for Public Procurement in August.

- **Publicity**

Several articles were posted and published in regional and national publications recognizing the SEC award winners in 2012 and 2013. Partners that receive awards are offered the assistance of a draft press release for their use. For calendar year 2012, 8 of the 9 award winners requested press releases.

We were successful in having an article published about DuPage County, IL in the February/March 2013 issue of "Government Procurement"; a national magazine. See Appendix B.

- **Sponsor Recognition**

The Challenge makes it a point to always publically acknowledge and thank its sponsors. Sponsors are listed and recognized twice in each webinar presentation, twice in all conference presentations, on the home page of the Challenge website, on the sponsor page of the Challenge website (http://stateelectronicschallenge.net/sec_sponsors.html), on the Challenge fact sheet (http://www.stateelectronicschallenge.net/pdf/sec_fact_sheet.pdf), and regularly in NERC Email Bulletin articles. When a sponsorship is renewed, this is a specific article about that in the Bulletin. The Email Bulletin has a distribution list of more than 870 subscribers around the country.

- **Technical Assistance & Program Support for Partners**

The Challenge offers individual technical assistance to Partners, as well as Partner-only webinars. The State Electronics Challenge also has a reciprocal relationship with the Federal Electronics Challenge (FEC) that allows Challenge Partners to participate in the FEC's monthly Partner webinars in addition to those offered by the SEC. The SEC arranged and held four Partner-only webinars during this reporting period: Green Procurement, Power Management, End-of-Life Management and Electronics Recycler Certification, and an Introduction to EPEAT.

Among the individual technical assistance provided to Partners were:

- Responding to queries about EPEAT, including:
    - The differences between EPEAT, ENERGY STAR, and 80PLUS for power supply efficiency
    - Coverage of slates and tablets
- Examples of EPEAT model contract language
- Resources and strategies to guide paper use reduction
- How to identify 3rd party certified electronics recyclers
- Review SEC program requirements
- Assistance with tracking and reporting data

- **What Partners say about the Program**

"Being an SEC partner these past few years has really assisted us with our continued effort towards sustainability. We benefit from the webinars, being a Partner, finding out what others are doing, and even being a presenter for one webinar, etc. We are fortunate to have found a program such as the SEC to continue our work towards lessening our carbon footprint and having our organization be so involved with such a worthwhile cause." *Centre Region Technology Program/State College, Pennsylvania*

"We have used last year's annual report as a tool to implement further sustainable practices with our electronics management. As a third party credible organization, we can use the recommendation for improvements to "make the case" to obtain County Board's approval. The receipt of the award & recognition got staff and board excited to do more." *DuPage County, Illinois*

"Participation in the SEC has provided the City of Tacoma with the opportunity to more closely track the purchases, power management implementation, and end-of-life management activities of its computer fleet. The exercise of completing the baseline and annual reports has identified areas where we can improve -- mainly in monitoring and tracking. We are doing the "right" things and we have been improving management of our numbers and prioritizing "green" initiatives. As we work our way through the report, we are discovering information gaps." *City of Tacoma, Washington*

"The annual reporting process has assisted Maryland Department of the Environment (MDE) in identifying short and long-term areas for improvement in its management of electronics, especially in the areas of end-of-life and operations and maintenance. MDE staff has attended several SEC partner webinars in the past year on topics such as green procurement and the EPEAT rating system, power management, and paper reduction in printing. Also during 2012, MDE used its experience with SEC to provide an overview of the program to other State agencies at a training event. Since then an additional State agency has joined the program." *Maryland Department of the Environment*

"Departments now have a guide with examples to go off of in order to purchase greener equipment. It has taken the guessing out of it. It has also helped to have a protocol in place for departments to follow when it comes time to dispose/recycle electronic equipment. They know what needs to be done with it now, instead of having to see what different departments and officials recommend doing." *Town of Prospect, Connecticut*

"We have found your webinars particularly helpful in educating our staff." *The University of New Mexico*

"We have benefited from the community recognition for electronics recycling efforts." *Ball State University,, Indiana*

- **Challenge Expanded to Include Office Equipment**

With the expansion of EPEAT to include imaging equipment, the State Electronics Challenge expanded its program as well. The requirements for each lifecycle phase were adjusted, and publicity about the changes sent out as a press release, in the NERC Email Bulletin, and listserv announcements to Partners. A Partner-only webinar also explained the new requirements and the EPEAT expansion. These changes required updates to the website as well as programming changes to the forms that Partners complete to report their annual efforts and to apply for an award.

- **Consultant**

A consultant team was hired to conduct national outreach and to deliver introductory webinars; specifically with the goal of promoting the program and securing additional Partners. This strategy has been successful and can be credited with several of the new Partners that have joined in the past year. The consultants have also been successful in securing speaking opportunities at state, regional, and national events.

- **SEC Announcement List**

SEC staff and consultants have made a targeted effort to expand the distribution list for email announcements about introductory webinars. As a result, the list now has more than 3,400 email addresses; exactly doubling over the past year.

- **Website**

Significant changes were made to the State Electronics Challenge website. These included streamlining the benchmark/annual reporting form and its associated online programming, and all of the content was re-written to make it both more understandable and more accessible. We had heard from several sources that it read too much like "corporate speak" and not approachable by many organizations. As noted above, the website was also updated to incorporate the program changes for imaging equipment.

In addition, several new resources were posted on the website and some updated. We also began recording webinars and posting those recordings on the website; the first being the e-scrap Partner-only webinar from May 2012 which featured Sims Recycling Solutions and Metech Recycling. A recording of an introductory webinar is also now available on the site.

A new contractual webmaster was hired to assist with site updates and maintenance. A separate consultant assists us with programming for the site.

- **New Name for the Challenge?**

Re-naming the State Electronics Challenge is under consideration. As with the style of the website language, we have increasingly been receiving feedback that the term "state" is deterring potential Partners as they

assume that the program only relates to state agencies. We are planning to survey current Partners about potential names that might better suit the program.

- **Collection & Analysis Of Partner Data, Including Environmental Benefits Results**

As noted above, 42 Partners submitted annual reporting data. Each report was analyzed and individualized sustainability reports issued to each reporting Partner. An example is attached as Appendix 1.

- **Partner Recognition**

Partners that have submitted annual reports may request recognition for their achievements in fulfilling the lifecycle requirements of one, two, or all three phases. Partners that receive recognition are given plaques, are recognized on the SEC website, and are offered individual press releases. In addition, a press release about the cumulative results is distributed nationally.

Funding

The Challenge currently has five private-sector sponsors: Samsung (Distinguished); Panasonic; R2/RIOS program; the Consumer Electronics Association; and Sims Recycling Solutions. Metech Recycling was a sponsor for part of calendar 2012, but did not renew its support. All of the other Sponsors renewed their support for the Challenge, contributing a total of $87,500; with one sponsorship committed, by not yet received, in the amount of $10,000. Sponsorship support has been as follows:

- 1 Distinguished Sponsor ($50,000)
- 4 Supporting Sponsors ($37,500 and $10,000 promised)

In addition to private-sector sponsors, the Challenge continues to be supported by an EPA Great Lakes Restoration Initiative through September 2014. Overall, the total amount of annual sponsorship has decreased as some sponsors have decreased their level of support and in one instance, as noted above, the sponsor elected not to continue its participation.

The Challenge continues to actively seek private-sector sponsorship, as well as grant support, in order to broaden the base of support, and to ensure long-term sustainability of the program.

Conclusion

The State Electronics Challenge continues to grow and gain stature. It has been an exciting year with impressive gains and demonstrable success. Your leadership and generosity has made a fundamental difference and has resulted in demonstrated environmental change and leadership. In summary – thank you.

Appendix A: Sample Partner Sustainability Report

Environmental Sustainability Report
Calendar Year 2012

Vermont Agency of Natural Resources

March 27, 2013

Data Input[9]

		Desktop Processors	LCD Monitors	CRT Monitors	Notebook Computers
Purchasing					
EPEAT®	**Bronze**				
	Silver				20
	Gold	15	15		123
Use					
Power Management Enabled	**75%**	476	605		447
Average Lifespan	**60 Months**	476	605		447
Paper Reduction	**Reams**	440			
End-of-Life Management					
Reuse – computers & monitors		78	4	5	36
Recycling –					
Computers & monitors (units)					
Mobile phones (units)					
Mixed office electronics (lbs.)					

EPEAT Purchasing: The Vermont Agency of Natural Resources gave preference to Electronic Product Environmental Assessment Tool (EPEAT®) registered computer products in calendar 2012.

Certified Recyclers: The Vermont Agency of Natural Resources used a recycler that was certified to the R2 Standard in this calendar year.

[9] Reported in units unless otherwise indicated.

Environmental Benefits[10]

	Purchasing	Use	Reuse & Recycling	TOTAL BENEFITS	
Reduction In	**How Much**			**How Much**	**Equivalent To**
Energy use	19,637 kWh	708,317 kWh	367,793 kWh	1.1 million kWh	Electricity to power 86 homes/year
Greenhouse gas emissions	3.3 metric tons of carbon equivalents	135 metric tons of carbon equivalents	71 metric tons of carbon equivalents	209.3 metric tons of carbon equivalents	Removing 150 cars from the road/year
Toxic materials, including lead & mercury	7 lbs.	25 lbs.	10 lbs.	42 lbs.	
Municipal solid waste	575 lbs.	11,105 lbs.	2,622 lbs.	14,302 lbs.	Waste generated by 3.4 households/year
Hazardous waste	351 lbs.	710 lbs.	378 lbs.	1,439 lbs.	

[10] Calculations for office equipment were made using the Electronics Environmental Benefits Calculator, Version 3.1, dated July 2012, available at http://www.epa.gov/fec/publications.html#calculator.
Calculations for paper reduction were made using the WARM model conversion factors, http://www.epa.gov/climatechange/wycd/waste/downloads/Paper%20Products.pdf, February 2012.

Appendix B:

County recognized for electronics recycling

By Resa Dimino
STATE ELECTRONICS CHALLENGE

and Cindy Wasser
COUNTY SOLUTIONS ASSOCIATE

Counties can well-positioned to mitigate environmental impacts of computer and office equipment by compromising their purchase, use and end-of-life management to “green” practices. And, DuPage County, Ill. has been a recognized leader in successful electronics management.

Electronics “greening” and recycling has been a priority since 2008, when county leaders updated their environmental policy to direct staff to purchase energy-saving equipment, particularly ENERGY STAR-rated products or those with auto shut-off or energy-saving options, and establish processes for recycling waste electronics. The policy update reflected the county Board’s commitment to “recycling waste materials, reducing energy consumption and investigating opportunities to cutback resource use.”

Since 2011, DuPage County has participated in the national State Electronic Challenge (SEC), a free, voluntary program that offers sources to local governments and others, to purchase greener electronic products, reduce the impacts of electronic products during use and safely manage obsolete electronics. SEC partners have access to extensive online resources, one-on-one technical assistance, and exclusive webinars and networking opportunities for peer exchange. SEC partners also have an opportunity to receive annual recognition and awards for their purchasing and recycling achievements.

“DuPage County has been committed to reducing our environmental impact in a fiscally responsible way,” said Board Chairman Dan Cronin. “The State Electronics Challenge verifies that our green initiatives are making an impact on the environment.”

County staff used SEC resources to develop and implement a green electronics program and identify cost-saving growth opportunities. For example, SEC data was used to build the case for double-sided printing to the County Board’s Technology Committee. The county recently adopted a policy requiring the purchase of printers, copiers and imaging devices with duplex capabilities that default to double-sided printing.

The DuPage County initiative is a collaboration between the IT Department and the Department of Economic Development and Planning — the agency charged with environmental initiatives in the county. The two departments work as a team to identify opportunities, build the fiscal and operational case to pursue those opportunities, and then implement.

Through participation in SEC, DuPage County has developed a consistent model for tracking and reporting its achievements. In 2011, the county’s SEC program eliminated nearly 7,000 pounds of solid waste, nearly 3,000 pounds of hazardous waste and another 25 pounds of toxic materials such as lead and mercury. The program has also reduced more than 380 tons of greenhouse gases — the equivalent of taking more than 250 cars off the road every year.

Those efforts earned DuPage County an SEC Silver Award in 2011. Their recent commitment to duplex printing makes the county a contender for the SEC Gold Award in 2012.

“We’re particularly proud that we reduced our energy use equivalent to powering 172 homes annually. This is exactly the kind of result we were hoping to achieve through responsible electronics management,” Cronin said.