SEC Lessons Learned from Award Recipients: Illinois Sustainable Technology Center (ISTC)
Joy Scrogum, December 8, 2015

Prairie Research Institute:
Illinois-focused Resource Research and Service
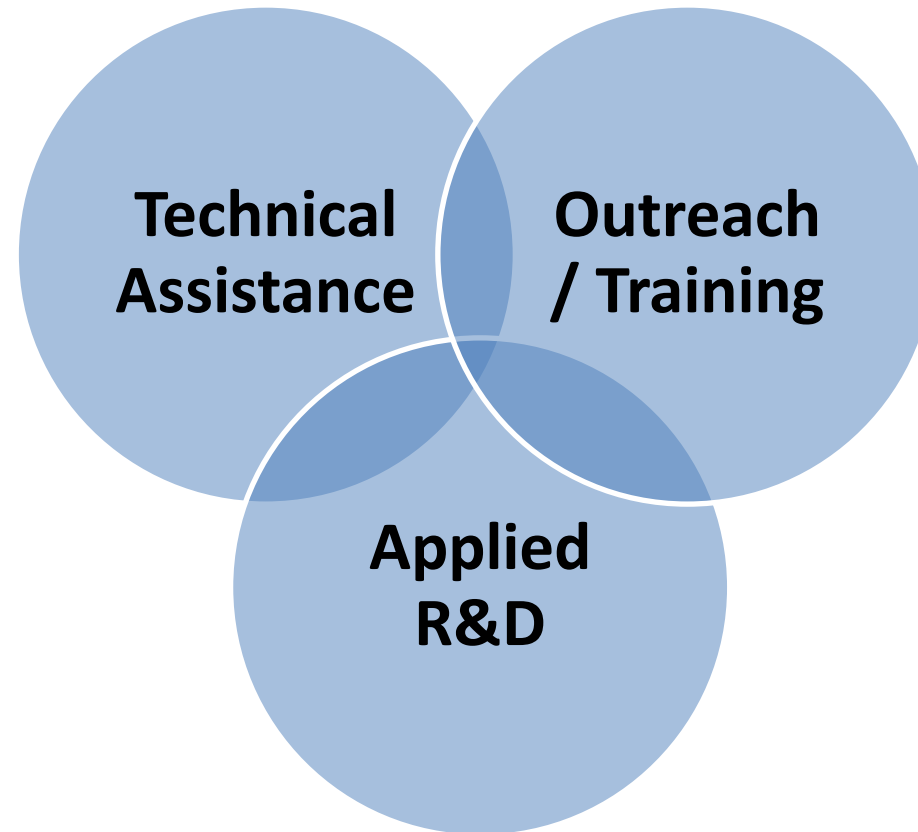*Addressing societal challenges that impact Illinois and the global community*

ISTC's Mission

"To encourage and assist citizens, businesses and government to prevent pollution, to conserve natural resources, and to reduce waste to protect human health and the environment in Illinois and beyond."

Becoming a SEC Partner

- www.sustainelectronics.illinois.edu
- Dedicated to the development and implementation of a more sustainable system for designing, producing, using, and managing electronic devices.
- Integrates principles of sustainability into curricula & educational experiences
- Technical assistance related to sustainable electronics issues provided to ISTC clients—including other campus units
- UI Sustainable Electronics Campus Consortium, http://www.sustainelectronics.illinois.edu/services/campusconsortium.cfm

Becoming a SEC Partner

- Set an example at the University, & with ISTC clientele
- ISTC became 1st partner in IL in 2011
- Many changes in staff & some organizational changes (IT turnover, etc.)
- Completed basic annual reporting until 2014; 1st yr. recognition was pursued
- ISTC internal sustainability committee—prime time/vehicle for creating internal policy

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February 4, 2011

Joy Scrogum
Emerging Technologies Resource Specialist
Illinois Sustainable Technology Center (ISTC)
One Hazelwood Drive
Champaign, Illinois 61820

Dear Ms. Scrogum,

I am delighted to welcome the Illinois Sustainable Technology Center (ISTC) as a State Electronics Challenge (SEC) Partner. In fact, you are the first Illinois Partner. Congratulations, and thank you for stepping forward and committing to change your life cycle management of electronics.

As a reminder, please be sure to submit your Baseline Reporting Form within the next four weeks. You can do it online at http://stateelectronicschallenge.net/annual_reporting_form.html.

You will be added to the SEC listserv, which means you'll be receiving updates on SEC resources, including free Webinar opportunities. If you'd like to add others to the listserv, please send their name and email addresses to info@stateelectronicschallenge.net. There are a number of PowerPoint presentations from past Webinars posted at http://stateelectronicschallenge.net/Webinars.html that may be of interest to you.

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- Some aspects of purchasing & all aspects of end-of-life management beyond control of individual units
- Policy written laying out how we comply with campus policies & how we go beyond campus compliance for each of the three lifecycle phases—Purchasing, Use, & End-of-Life Management

ISTC Policies for the Sustainable Purchase, Use, and End-of-Life Management of IT Equipment

Last updated December 2014

Purchasing

Campus Policies

As a division of the Prairie Research Institute at the University of Illinois at Urbana-Champaign, the Illinois Sustainable Technology Center (ISTC) complies with the following UI policies when making IT purchasing decisions:

- Energy Use Policy: University of Illinois at Urbana-Champaign: http://www.energymanagement.illinois.edu/pdfs/EnergyUsePolicy.pdf. This policy states that "Campus units should purchase energy-efficient equipment to the greatest extent possible, in accordance with the Procurement Code and USEPA ENERGY STAR® requirements. (Urbana is a registered Energy Star campus.)"
- Campus Administrative Manual: Acquiring Energy-consuming Equipment: http://cam.illinois.edu/vi/VI-b-15.htm. "Units should opt for the most energy-efficient model where the simple payback is less than the expected life of the device/system. Units are asked to favor the lowest energy-using alternative, even if it comes at a slight premium in first cost."
- Campus Administrative Manual: Acquisition Policy for Computer and Networking Equipment Software: http://cam.illinois.edu/vii/VII-b-4.htm. Largely a financial policy, this policy does note as objectives "To evaluate the impact of the acquisition on University facilities, including space, utilities, and air conditioning," and "To evaluate the impact of the acquisition on campus computer systems, both existing systems and future systems development." These objectives are relevant to sustainability in terms of considering energy use and the estimated useful life of a product in purchasing decisions.
- Campus Administrative Manual: Installation of Equipment Requiring Special or Controlled Climatic Conditions: http://cam.illinois.edu/vi/VI-b-7.htm. "The installation of equipment having a material effect upon surrounding climatic conditions must be provided to F&S Engineering Design by the building coordinator for review prior to purchase."
- Campus Administrative Manual: Acquisition Policy for Energy-Efficient Equipment: http://cam.illinois.edu/vii/VII-b-13.htm. "Beginning June 17, 1994, the date the U.S. Environmental Protection Agency's (EPA) "Energy Star" logo made its debut, all personal computers, monitors, and printers purchased must have the "Energy Star" logo affixed to them."
- Campus Information Technologies and Educational Services (CITES) Guidelines for Energy Conservation and Computing Equipment: https://www.cites.illinois.edu/guidelines/energy.html#purchasing. These guidelines are also kept in mind when considering the purchase of IT equipment.
- Campus Administrative Manual: Recycling, Recycled Products Procurement, and Waste Reduction: http://cam.illinois.edu/vii/VII-b-9.htm. This policy not only gives preference to products with recycled material content, it also encourages waste reduction through the purchase of products that have a long useful life. "By design, some items have great reliability or are easier to repair than other similar items."
- OBFS Urbana Campus Copier Rental: https://www.obfs.uillinois.edu/purchases/purchases-types/copiers/. Approved suppliers must be used; these suppliers provide equipment that carries the "ENERGY STAR" logo to indicate energy efficiency.

With regard to packaging associated with purchased devices, see Campus Administrative Manual: Policy on Polystyrene Products: http://cam.illinois.edu/vii/VII-b-11.htm. "Polystyrene packing materials received in material shipments should be retained for reuse in outgoing packages."

Beyond Campus Compliance

As a leader in fostering innovative processes, procedures, and techniques promoting sustainability within the State of Illinois and beyond, and a partner of the State Electronics Challenge, ISTC is committed to going beyond the minimum campus requirements in the following ways:

- Reused Equipment. Cognizant of the fact that reuse is higher on the US EPA Solid Waste Management Hierarchy than recycling, whenever possible based upon availability and performance standards, reused equipment will

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Purchasing

- Campus policy already focuses on energy-efficient (Energy Star) equipment & recycled content where possible
- ISTC policy includes preferences for reused (from campus, State, or federal surplus), refurbished equipment, local availability, & a minimum of EPEAT Bronze (for applicable devices)

Use

- Campus policy includes turning devices off when not in use, energy conservation, limiting printing & default double-sided printing (suggestion)
- ISTC policy makes double-sided default a requirement & Energy Star 'sleep' & 'power down' features enabled on all equipment except certain computers controlling lab equipment

End-of-Life Management

- All functioning equipment on campus is put into campus surplus property for reuse/recirculation
- Sent to state Central Management Services Surplus property if not reused on campus for use in other state units, public auction, or donation to eligible IL schools, non-profits, & daycare centers (State Surplus Computer Donation Program)
- Non-functioning items are recycled via an R2 certified recycler

RIOS™
R2
CERTIFIED ELECTRONICS RECYCLER

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Challenges

- Purchasing records weren't always clear; IT staff order devices in bundles, so something that looks like 1 item in our records could be multiple items
- University centralized purchasing system is unwieldy in some ways; products can be flagged as 'green' or 'recycled' but meanings/reasons for designations not always clear
- Can't search central purchasing system for EPEAT registered items
- Existing campus policies related to electronics not all listed in one manual/on one site, so half the battle was gathering all the campus policies together.

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SEC
STATE ELECTRONICS CHALLENGE

ENVIRONMENTAL SUSTAINABILITY REPORT CY 2014
Partner: Illinois Sustainable Technology Center
Date: March 26, 2015

ENVIRONMENTAL BENEFITS

	Reduction in:	PURCHASING	USE	REUSE & RECYCLING	TOTAL BENEFITS	
		HOW MUCH			HOW MUCH	EQUIVALENT TO
	Energy use	12,233 kWh	73,358 kWh	228,951 kWh	314,542 kWh	Electricity to power 25 homes/year
	Greenhouse gas emissions	2 metric tons of carbon equivalents	14 metric tons of carbon equivalents	44 metric tons of carbon equivalents	60 metric tons of carbon equivalents	Removing 43 cars from the road/year
	Toxic materials, including lead & mercury	2 lbs.	0 lbs.	7 lbs.	9 lbs.	Weight of 2 bricks
	Municipal solid waste	385 lbs.	0 lbs.	1,632 lbs.	2,017 lbs.	Waste generated by 0.5 households/year
	Hazardous waste	81 lbs.	0 lbs.	176 lbs.	257 lbs.	Weight of 1 refrigerators

Calculations for computers made using the Electronic Environmental Benefits Calculator (EEBC), Version 3.1, July 2012, at: http://www2.epa.gov/fec/publications-and-resources#calculator. Imaging equipment calculations used the U.S. Department of Energy calculator (http://energy.gov/eere/femp/energy-and-cost-savings-calculators-energy-efficient-products) for the use phase, and the EEBC for recycling. Paper reduction calculations were made using the WARM model conversion factors, http://www.epa.gov/epawaste/conserve/tools/warm/pdfs/Paper_Products.pdf, June 2014.

Partner Commitments to Green Electronics

EPEAT® PURCHASING:
Illinois Sustainable Technology Center included Electronic Product Environmental Assessment Tool (EPEAT®) registered computer products as a required or preferred standard in bids, contracts, and/or leases for IT equipment in calendar 2014.

Certified Recyclers:
Illinois Sustainable Technology Center used a recycler that was certified to R2 in this calendar year.

DATA INPUT Reported in Units unless otherwise indicated		DESKTOP PROCESSORS	LCD MONITORS	CRT MONITORS	NOTEBOOK COMPUTERS/ TABLETS	COPIERS[1]	PRINTERS[1]	MULTI-FUNCTION DEVICES[1]	Total
PURCHASING									
EPEAT®	BRONZE								
	SILVER							1	1
	GOLD	15	25		8				48

[1] EPEAT purchases for imaging equipment were not included in benefits calculations in 2014 as a calculator tool is not yet available.

DATA INPUT Reported in Units unless otherwise indicated		DESKTOP PROCESSORS	LCD MONITORS	CRT MONITORS	NOTEBOOK COMPUTERS	COPIERS	PRINTERS & MULTI-FUNCTION DEVICES	Total
USE								
Power Management Enabled	Unknown					2		5
	100%	58	105		58		16	237
Average Lifespan	Unknown							
Paper Reduction	Unknown	N/A						

Duplex Copying: Illinois Sustainable Technology Center had 100% of its copiers, printers, and multifunction devices set to default double sided printing.

DATA INPUT Reported in Units Unless otherwise indicated[1]	DESKTOP PROCESSORS	LCD MONITORS	CRT MONITORS	NOTEBOOK COMPUTERS/ TABLETS	COPIERS	PRINTERS	MULTI-FUNCTION DEVICES	Total
END OF LIFE MANAGEMENT								
REUSE	49	20		4		14		87
RECYCLING								
RECYCLING: mobile phones (units)								
RECYCLING: mixed office electronics (lbs.)								

[1] For imaging equipment, unit data reported by Partners was converted to pounds for benefits calculations using the EEBC.

Moving Forward

- May increase purchasing requirements to EPEAT silver level
- ISTC staff members are involved with recently formed campus-wide committee on purchasing and waste, so hopefully our policy can be influential at that level
- We'll continue to encourage other units & other organizations to join SEC
- **Illini Gadget Garage**—SEI lead campus project. Collaborative repair center for students and staff owned electronics. So we're promoting repair and extending the useful life of electronics. Funded by Student Sustainability Committee.

http://www.sustainelectronics.illinois.edu/research/gadgetgarage.cfm

THANK YOU

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