

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

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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:** <https://icap.sustainability.illinois.edu/files/project/222/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 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."

See also <http://sustainability.illinois.edu/campus-sustainability/actions/initiatives/styrecycle/> for information on the campus polystyrene packaging recycling program, "Styrecycle." The [ISTC headquarters building on the Urbana-Champaign campus participates in this program](#). Collection bins are located in the main hallway on the first floor.

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 be obtained to meet ISTC staff and project needs instead of purchasing new equipment.** Equipment may be transferred from University surplus, state or federal surplus warehouses, or from one University department to another. See <https://www.obfs.uillinois.edu/equipment-management/retrieving-free-surplus-equipment/> and <https://www.obfs.uillinois.edu/training/materials/accounting/#fadrp> regarding proper procedures related to such transfers.
 - UIUC surplus warehouse information (location, hours, phone number) is available at <https://www.obfs.uillinois.edu/common/pages/DisplayFile.aspx?itemId=95158>.
 - State of Illinois surplus property, state surplus public auction (iBid), and federal surplus property information is available at <https://www.illinois.gov/cms/business/surplus/Pages/default.aspx>.
 - Federal surplus property may be obtained via <http://www.govdeals.com/index.cfm>, <http://www.govliquidation.com/>, or <http://gsaauctions.gov/gsaauctions/gsaauctions/>.
- **Refurbished Equipment.** Refurbished electronics are those which have been returned to a manufacturer or vendor for various reasons, and which have been repaired, if necessary, and tested to ensure functionality equivalent to a new product. These products are different from those simply labelled “used” because of this verification of functionality (see http://en.wikipedia.org/wiki/Refurbishment_%28electronics%29). Refurbished electronics are readily available from electronics retailers, usually at a discount, and it is typically possible to search retail web sites specifically for refurbished items (e.g. <http://www.bestbuy.com/site/outlet-refurbished-clearance/refurbished-electronics/pcmcat748300667564.c?id=pcmcat748300667564>). **ISTC staff will preferably purchase refurbished equipment when such equipment is available, and the price point is equal to or less than a comparable new item.**
- **Local Availability.** When obtaining new, used, or refurbished items outside the Champaign-Urbana area, the use of fuel and cost of transportation/shipping should be considered. Note however that the embodied energy of electronic devices often outweighs energy use by the consumer during operation of the device during its useful life (see <http://www.aceee.org/files/proceedings/2012/data/papers/0193-000301.pdf>, for example). Sourcing of used or refurbished products is therefore potentially preferable to sourcing of local products if the goal is to minimize the carbon footprint of the purchase when it comes to consumer electronics. Thus, **ISTC staff are advised to prefer locally available electronics over reused items from other areas only when the locally available item is also used/refurbished, or when the costs of transportation of a used/refurbished item from elsewhere could conceivably outweigh the benefits of extending the useful life of an existing product** (e.g. shipping a refurbished item from another country could obviously outweigh the potential benefits).
- **EPEAT Registered Products.** Originally funded by the US EPA and currently administered by the Green Electronics Council, the Electronic Product Environmental Assessment Tool (EPEAT) is a searchable database of electronics products in certain categories. EPEAT criteria are developed collaboratively by a range of stakeholders, including manufacturers, environmental groups, academia, trade associations, government agencies, and recycling entities. Criteria for current product categories are based upon the IEEE 1680 family of Environmental Assessment Standards. The criteria include attributes from throughout the product life cycle—i.e. throughout the stages of design, manufacture, use, and disposal. See <http://www.epeat.net/resources/criteria/#tabs-1=overview> for further information. Products on the EPEAT registry are rated as Bronze (meeting all required criteria), Silver (meeting all required plus at least 50% of optional criteria), or Gold (meeting all required plus at least 75% of optional criteria). All EPEAT registered products meet the current ENERGY STAR specifications, meaning any EPEAT registered product would conform to the campus policies referencing ENERGY STAR (above). The EPEAT registry currently includes desktops, laptops/notebooks, workstations, thin clients, displays (computer monitors), televisions, printers, copiers, scanners, multifunction devices, fax machines, digital duplicators and mailing machines. New products may be added to the registry in the future as criteria are developed for them. **When purchasing new IT equipment, ISTC staff will purchase devices that are registered as at least EPEAT Bronze, provided the device in question is currently covered by the EPEAT registry.** If you have questions about how to use the EPEAT registry to identify environmentally preferable equipment, you may contact Joy Scrogum (jscrogum@uillinois.edu; 217-333-8948) or consult the State Electronics Challenge Resources page (<http://www.stateelectronicschallenge.net/resources.html>), which includes guidance on EPEAT.

Use

Campus Policies

ISTC complies with the following UI policies regarding IT equipment use:

- **Energy Use Policy: University of Illinois at Urbana-Champaign:** <https://icap.sustainability.illinois.edu/files/project/222/EnergyUsePolicy.pdf>. Note that this policy states (under “General” section “E”) that “Printers, monitors, projectors, copy machines, and other office equipment should be turned off when not in use.” It also contains a link to an old “CITES” (now Technology Services) web page on energy efficiency and computing equipment, which no longer exists. **It should be further noted that this policy was written several years ago and the energy efficiency of devices has changed in the interim.** In recent times, UI Technology Services staff have advised ISTC IT staff that frequent shut downs and startups may have negative impacts on hardware and that the information on the old “CITES” page was out of date, and so does not have a correlating page on current Technology Services site. Technology Services no longer makes any official recommendations regarding the shut down of devices. It has been suggested by IT personnel that **allowing devices to naturally go to sleep or enter power-saving mode is in general good practice for energy efficiency and device maintenance.** Because ISTC enables ENERGY STAR sleep functions and power down features on devices that are not exempt due to experimentation or remote log-in requirements, our practices are in line with this idea—see section below regarding such issues. If a device is rarely used, then it may well be good practice to turn it off when not in use. If a device is used relatively frequently, allowing it to sleep or power down during periods of inactivity is a solid strategy for efficiency.
- **Campus Administrative Manual: Recycling, Recycled Products Procurement, and Waste Reduction:** <http://cam.illinois.edu/vii/VII-b-9.htm>. In particular, note the “Waste Reduction” section and statements on default double-sided printing and limiting printing.

Beyond Campus Compliance

To ensure the most efficient use of resources, ISTC IT staff will ensure the following:

- ENERGY STAR “sleep” functions and “power down” features are enabled on all desktops computers, notebook/laptop computers, monitors, copiers, printers, and multi-function devices owned by ISTC, **with the exception of computers used for remote log-in and those within our laboratory space which must not be allowed to hibernate or power down in any way due to their control of experimental equipment necessary for ongoing monitoring and experimentation.** ISTC IT staff will work with the Applied Research on Industrial Environmental Systems (ARIES) Program staff to identify any non-essential devices within the laboratory space (e.g. within lab staff office spaces) to which power management functions may be applied. Implementation of sleep functions will be done with guidance from the ENERGY STAR web site, at http://www.energystar.gov/index.cfm?c=power_mgt.pr_power_mgt_implementation_res and https://www.energystar.gov/index.cfm?c=power_mgt.pr_power_mgt_users. **If ISTC staff members outside the laboratory wish to alter their power management settings, they should consult with IT about their reasons and computing needs to ensure the best solution for performance and resource management.**
- **All ISTC printers, copiers, and multifunction devices will be set to duplex mode by default.** This is a requirement rather than a suggestion. IT staff will guide the rest of the staff on how to override this default if needed for a particular print job. IT staff will periodically check all imaging equipment to ensure that the duplex setting is the default. IT staff will also provide guidance on other ways to save paper (e.g. using print preview, using single spacing and narrow margins when possible, sharing documents electronically, etc.).

End-of-Life Management

Campus Policies

ISTC complies with the following UI and State of Illinois policies regarding IT equipment management at end-of-life. Procedures for end-of-life management for electronics are centralized at the State level.

- **Equipment Disposal Methods:** <https://www.obfs.uillinois.edu/equipment-management/equipment-disposal-methods/>. General info on disposal and data elimination from computers. This addresses reuse within the University.
- **Dispose of Unneeded Equipment:** <https://www.obfs.uillinois.edu/bfpp/section-12-property-accounting/dispose-of-unneeded-equipment>.
- **Remove Data from Electronic Devices:** <https://www.obfs.uillinois.edu/bfpp/section-12-property-accounting/remove-data-from-electronic-devices>. Includes links to information on policies specific to the various UI campuses.
- **Privacy and Information Security: Disk Scrubbing:** <https://security.illinois.edu/content/disk-scrubbing>. Discusses overwriting of data on hard drives and provides a link to the relevant State of Illinois law. See also CITES Disk Scrubbing FAQ: <https://security.illinois.edu/content/disk-scrubbing-faq>.
- **Campus Administrative Manual: Disposal of Magnetic Media:** <http://cam.illinois.edu/viii/VIII-1.4.htm>
- **Campus Administrative Manual: Recycling, Recycled Products Procurement, and Waste Reduction:** <http://cam.illinois.edu/vii/VII-b-9.htm>.
- **State of Illinois/CMS Surplus Property:** <https://www.illinois.gov/cms/business/surplus/Pages/default.aspx>. This includes information on the redistribution of functioning equipment at the State level. If functioning items are not redistributed at the University level, they may be redistributed to other State entities (via State Surplus Property), or to the public via iBid public auctions.
- **CMS Electronics Recycling/Data Wipe Policy:** <https://www.illinois.gov/cms/agency/recycling/Documents/2013Datawipe-DisposalPolicy.pdf>. This document, dated November 4, 2013, includes a statement regarding contracts for the recycling of electronic devices, **and the certification of those vendors with R2 and ISO.**
- **Facilities & Services Waste Management and Recycling (Urbana campus):** <http://www.fs.illinois.edu/services/waste-management-recycling>. Includes links to information on battery recycling and fluorescent lamp recycling. Note that ISTC is a drop off for recycling rechargeable batteries.

Beyond Campus Compliance

- Note that F&S no longer supports single-use battery recycling. As of December 2016, single use battery recycling drop-off is available at the [Illini Gadget Garage](#), paid for with the Sustainable Electronics Initiative Various Donors Fund. Contact Joy Scrogum (jscrogum@illinois.edu; 217-333-8948; ISTC headquarters building in Champaign, Room 206) for details or for further recommendations.