



**GREEN OFFICE
GUIDE**

Green Office Guide

Overview

This document is meant to provide guidance to office's seeking **Green Office Certification** through Penn's Sustainability Office. The guide is organized according to activities on the *Green Office Certification Checklist*.

To become certified, you must complete and submit the *Green Office Certification Checklist* and the *Green Office Certification Application Form* to sustainability@upenn.edu. You can find both documents on sustainability.upenn.edu.

Note: Please include in your email subject line "Green Office Certification" and your office name when submitting your materials.

About Green Office Certification

Offices represent a significant portion of campus energy and material use and waste. The Penn Sustainability Office recognizes the efforts of staff and faculty to green their daily activities by offering four levels of Green Office certification.

Participating offices earn points by completing specific sustainability actions, which are assigned point values based on their impact and level of difficulty to implement. There are over **205** possible points that can be earned. Some actions can be implemented at no cost; others may have a cost associated with the initial implementation, but result in operational savings over time. No office is expected to implement all the actions listed in this document. Points required for certification are:

- LEVEL 1 - 50 POINTS
- LEVEL 2 - 100 POINTS
- LEVEL 3 - 140 POINTS
- LEVEL 4 - 180 POINTS

Participating green offices will receive an emailed certificate celebrating their achievement, and will be acknowledged on the Penn Sustainability Office website and other publications for their positive contribution to sustainability at Penn. Certification is valid for 3 years from the date of the award. To recertify, an office must submit a new application for certification.

Sustainability staff is available to talk with your office about the Green Office program and to assist your office in reviewing its operations and selecting the appropriate level of certification to strive for. To set up a talk or get assistance for your office, send an email to sustainability@upenn.edu, using the subject line "Green Office".

TIP: Use the document’s search function (CTRL + F) to quickly find specific Green Office Certification actions from the Checklist.

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WASTE

W.1 We conducted, or hired a consultant to conduct, an audit of our waste stream.

A waste audit is an analysis of your office waste stream. It tracks the type of waste your office generates, and how much of each type is recovered for recycling, reusing or discarding. Using this data, your office can identify ways to reduce waste, increase recycling, and determine the potential for cost savings.

Instructions: A waste audit can either be conducted in house, for a small office, or through an outside contractor. To conduct an in-house, volunteer-based waste audit visit: <https://www.nnva.gov/722/How-to-Conduct-a-Waste-Audit>. To solicit a professional waste audit, please contact sustainability@upenn.edu for more information and guidance. Please include 'Green Office – Waste audit' in the subject line.

W.2 We have held at least one Office Clean Out Day that promoted recycling and reuse in the past year.

Reuse and recycling reduce the amount of raw materials and energy used to create new items. They also reduce the amount of waste generated. An office clean out can help increase awareness of waste practices and recycling in the office as well. Finally, reuse reduces the associated costs of purchasing new materials.

Instructions: See the Office Clean Out Guide in Appendix 1.

W.3 We set double-sided printing as a default on our office computers, and we placed a visual prompt on our copy machine to remind members of our office to double-side copy.

Double-sided printing reduces the amount of paper used per printout, thus reducing use and waste. According to the U.S. Environmental Protection Agency (EPA), pulp and paper mills are among the worst polluters to air, water and land of any industry in the country.

Instructions: How to Set Up Double-Sided Printing on Individual Computers

- a) Go to the Start Menu, click on 'Control Panel'
- b) Choose 'Printer', under 'Hardware and Sound'
- c) Select your default printer and click 'Select Printing Preferences'
- d) Under the Finishing tab, click on the box next to 'Print on Both Sides'
- e) Click OK to Apply changes.
- f) Repeat steps 3-5 to change the settings on other printers you may regularly use.

Printers must have a duplex tray to take advantage of this option. Check with your IT staff to determine if one needs to be ordered. In some instances, your IT staff needs to make these changes for users. Contact your school's IT support for assistance. A sign reminding staff to reduce paper use can also be posted on your copiers and printers.

Please note that you can change individual jobs to single-sided printing if necessary. Go to Print - Preferences - Finishing to change this setting. Visit the green IT website for more information <https://www.isc.upenn.edu/green-it>

W.4 We keep a stack of used paper near printers to be re-used for scratch paper or internal memos, made into notepads, or loaded into a designated bypass tray on printer. (1 point)

Instructions: How to load paper in bypass tray:

1. Open bypass tray and place paper from scratch pile on tray, blank side down. Be sure the paper is all the way in towards the printer, the slide guides are adjusted to holding the paper flush with the side, and the paper is not curled.
2. In the menu, select the bypass tray for the paper source. Select the size and type of paper used.
Note: When loading paper in the bypass tray, the side facing down is the side that is printed on.

How to make used paper into notepads:

1. Collect previously used one-sided paper in a central location.
2. Drop off your previously used one-sided paper at the Campus Copy Center and they will make them into notepads. Campus Copy Center: www.campuscopycenter.com

W.5 Managed Print

- a) *We have installed toner auto-replenishment software to eliminate keeping excess toner in inventory.*
- b) *We have eliminated all personal printers and utilized a shared, networked print environment only.*
- c) *We have undergone a full-managed print assessment and implementation, including elimination of most/all personal printers, with our preferred Managed Print Services supplier.*

Instructions: To learn more about the Penn Managed Print Services program, visit the Penn MPS website: <http://cms.business-services.upenn.edu/purchasing/component/content/article/2-default-about/478-the-penn-managed-print-services-mps-program.html>

If you would like to enroll your business area for a print environment assessment, choose “Request and Assessment” and complete the online MPS CUSTOMER INTAKE SURVEY. A managed print Frequently Asked Question document can also be found online at the MPS homepage.

W.6 We have a designated area in our supply closet, or elsewhere in our office, for sharing office supplies that can be re-used (file folders, binders, pens, paper clips, etc.).

Reuse is the most preferable options in the waste hierarchy.

Instructions: Designate an area or shelf for reusable supplies. Make sure the reusable supplies are conveniently located for ease of access. It is often best to store reusable supplies with new supplies so staff can easily choose to reuse. Speak with the person in your office in charge of supply purchases and ask them to encourage reuse as a way to reduce unnecessary purchases and waste. Encourage staff to collect reusable supplies at office cleanouts.

W.7 We have a designated person in our office who unsubscribes people from receiving multiple copies of the Almanac and Current, or other junk mail.

Instructions: To reduce duplicate deliveries of these publications, designate one office member to be in charge of unsubscribing people from duplicates. Find a convenient, central location within the office where duplicates can be collected. Ask office members to drop unwanted mailings into the box, in order to be removed from the distribution list. Inform office members of the bin location and why it is important to reduce unwanted mailings. Remember to recycle the duplicates!

- To unsubscribe from the Almanac, contact: 215 898-5274 or almanac@upenn.edu
- To unsubscribe from Current, contact: current@pobox.upenn.edu
- Information on how to stop junk mail: <https://www.treehugger.com/culture/stop-junk-mail-7-ways-to-reduce-it-and-opt-out-for-good.html>

W.8 We have replaced disposables with permanent ware (mugs, cups, dishes, utensils, etc.) and use refillable or bulk containers for sugar, salt & pepper, ketchup, etc. for staff and visitors.

If you buy just one cup of coffee or tea in a disposable cup every day, you'll create about 23 pounds of waste in one year. It only takes about 24 uses of a reusable stainless steel coffee container to break even with a disposable paper coffee cup in terms of energy used to create the initial product. Using refillable and bulk containers reduces the waste associated with individual packets.

Instructions: Share an email with your colleagues or post a letter in your office kitchen. Example below:

Dear _____,

Our office is committed to Penn's climate action goals and improving campus sustainability. As part of that effort, we want to eliminate paper/plastic cup waste from our office. We have a supply of reusable mugs. Please remember to bring your mug to upcoming meetings. Thank you for doing your part to make Penn more sustainable.

Visit Penn Purchasing Services to find supplies: <https://cms.business-services.upenn.edu/purchasing>

W.9 We have installed a water bottle filler station (e.g. Elkay or Quench).

Providing a hydration station encourage reusable bottle use!

Instructions: Contact your Building Administrator to discuss the possibility of installing a Quench filter OR Purchase an activated carbon filter and make sure to educate members of the department on the usage and purpose of the new filtration system or water filter. Consider making an office policy to eliminate purchases of bottled water. Provide filtered water and reusable glasses at office meetings for guests instead.

- Quench Filter listing on Penn Purchasing: <https://cms.business-services.upenn.edu/purchasing/about/strategic-sourcing/information-technology/492-408045.html>
- Building Administrator Listing: <https://www.facilities.upenn.edu/contacts/building> (search by building)

W.10 We do not provide any single use plastic water bottles, and have eliminated the option to purchase plastic water bottles in vending machines.

See Above.

W.11 We list any used equipment, furniture, and supplies on BEN's Attic, try to donate before disposing of them

Instructions: Learn how to post used furniture on BEN's Attic: <https://upenn.unl.edu/default.aspx>

You can often work with your furniture and equipment suppliers to take unwanted equipment for use in their recycling or refurbishing programs. When purchasing new furniture, ask the furniture dealer if they have a recycling or refurbishing program for old furniture (the furniture you are replacing). If the dealer does not have a program or will not recycle the used furniture, you can recycle the furniture through eForce or Elemental, two Penn approved vendors.

- Building Administrator Listing: <https://www.facilities.upenn.edu/contacts/building> (by building)

- eForce: www.eforcecompliance.com
- Elemental: <http://eleminc.com>

W.12 We regularly review proper recycling practices at staff meetings or through email to ensure that all members of our office are aware of the procedures and can ask questions.

Instructions: Information to include in a presentation or email:

Penn uses single-stream recycling. This means that all recyclable items can be placed together in the same bin. Some areas on campus still have separate bins for "Mixed Paper" and "Plastic/Glass/Aluminum", but all recyclables go to a single stream recycling facility. When the recyclables are taken to the recycling facility, machinery sorts them so that they can be recycled appropriately. Here is a detailed list of what can be recycled on campus: Paper, cardboard, glass, plastics, metals, all hard plastics, all colors of clean glass, all standard paper, all clean cardboard, all metals.

If you provide boxes/recycling opportunities for specialty items, such as pens, cell phones, e-waste, include that in your presentation. Consult the Facilities website for more detailed information about what and where to recycle on campus: www.facilities.upenn.edu/sustainability/waste-management-and-recycling

W.13 We have eliminated desk-side trash containers and switched to desk-side recycling with central trash locations or mini-bins for desks to hold trash.

Desk side recycling can help improve participation rates by making recycling easier. Switching to central trash means that occupants must make an extra effort to place things in the landfill stream, often reducing trash volumes significantly. If your office is not ready to take this step, having desktop mini-bins is a great option. Mini-bins are small bins that are not lined. It is the responsibility of each employee to empty his or her mini-bin into a centralized trash location.

Instructions:

1. Work with Building Administrator to purchase desk-side recycling bins for all staff.
2. Clearly label the new central trash bins and be sure employees are aware of their locations.
3. Provide staff with information about why this program is important and about new responsibilities for waste management. Ensure employees understand what should be recycled desk-side and what must be thrown away in the central trash bins.
4. If desired, contact sustainability@upenn.edu for desktop mini-bins.

W.14 We pair trash, recycling and composting bins (where appropriate) in meeting rooms, conference rooms and classrooms, and these bins are clearly labeled with the correct signage.

By locating the three bins next to each other in convenient locations it can encourage users to easily separate their waste.

Instructions: Contact your Building Administrator in order to purchase the necessary black (trash), blue (recycling), and green (compost bins) and then label them on arrival. It is important to educate members of the department on what can be placed in each bin to avoid contamination.

- Single Stream Recycling - Use the BLUE bins
- Landfill Trash - Use the GRAY or BLACK bins
- Composting – Use the GREEN Bins

Information and print-out posters on what can be trashed, recycled or composted at Penn can be found here: <https://www.facilities.upenn.edu/sustainability/waste-management-and-recycling>

Building Administrator Listing: <https://www.facilities.upenn.edu/contacts/building> (search by building)

W.15 We recycle inkjet and laser jet cartridges.

Three pounds of raw materials are saved when you recycle an empty ink cartridge.

Instructions: Business Services has joined with Telrose Corporation and Office Depot to provide easy and convenient recycling programs for all used ink and toner cartridges. Rather than shipping these cartridges individually, Telrose is consolidating shipments for the entire University. Your Telrose delivery person will pick-up used cartridges from your office, palletize them, and ship them in bulk to the manufacturer.

To request a pick-up of your used cartridges, or if you need a free collection box, send an email with your name, address, and suite/office to support@telrosecorp.com. It's easy, convenient, and free!

W.16 We do a large e-waste drive annually or more frequently and we recycle all electronics that leave our office.

E-waste contains many harmful materials that should not be taken to landfills but can be recycled and reused.

Instructions: Green IT provides a number of ways to recycle e-waste and ensure its proper disposal: <https://www.isc.upenn.edu/how-to/green-it-computers-peripherals>

To recycle all office electronics:

1. Select a recycling vendor.
2. Create an office policy that all electronic equipment that is going to be disposed of is to be recycled through that vendor.

To host an office e-waste collection drive for staff and faculty:

1. Be aware that most vendors, such as Elemental and eForce that have University contracts, will charge for recycling services. Because of this, you may consider coordinating your drive with other offices on your floor or in your building to reduce costs.
2. Publicize your event with announcements at office meetings, through an office email, and/or posters. Remind office members well in advance and again right before the event.
3. Make sure the collection location is central and easy to find. Work with your IT staff so you have their technical help on the day of the event if needed.

eForce: <https://cms.business-services.upenn.edu/purchasing/component/content/article/10-supplier-database/223-479630.html>

Elemental: <https://cms.business-services.upenn.edu/purchasing/component/content/article/10-supplier-database/224-193966.html>

W.17 We use rechargeable batteries (instead of disposable) at least 50% of the time.

Batteries contain harmful materials such as mercury and lead that should not be thrown in landfills. Using rechargeable batteries reduces disposal of these harmful materials.

Instructions: Identify which electronic devices can use rechargeable batteries. Purchase a battery charger and rechargeable batteries for portable electronic devices in the office. Store these in a central location and inform office members of their existence and location. Label the rechargeable batteries so they are not mistaken or mixed up with personal belongings. Remember to unplug the charger when it is not in use. Track purchases of rechargeable and disposable batteries.

Visit Penn Purchasing Services for supplies: <https://cms.business-services.upenn.edu/purchasing/>

For Safe Disposal, see EHRS: www.ehrs.upenn.edu/programs/environ/waste/battery_disposal.html

W.18 We provide a well publicized box or bin for recycling specialty items like writing implements, cell phones, eye glasses, shoes, batteries, masks or gloves, and other items.

Recycling specialty items is a great way to reduce overall waste.

Instructions: Locations across campus collect specialty items. Visit the facilities and real estate website to find out where. In your own office - Find a convenient, central location within the office where these items can be regularly collected and then drop them off or arrange for your own collection. Clearly label the bins. Inform office members of the bin location and educate them on what can be collected.

- Pens/Pencils - All brands of pens and markers are acceptable - For every writing instrument that Penn recycles, the University will receive two cents (\$0.02) which will be designated to the new Green Fund. <http://www.purchasing.upenn.edu/green-initiative/sanford.php>
- Big Green Box - Your office can use the Big Green Box program to recycle various items. The Big Green Box is shipped to your office pre-constructed. Once the box is full of your selected item, drop it off at any FedEx shipping location to have the contents recycled. Shipping costs are included in the initial price of the box.
- You can also find a drop off location for recycling specialty items through <http://www.call2recycle.org/>.

PURCHASING

For all of the below questions a great resource to visit is the Penn Green Purchasing website: <https://cms.business-services.upenn.edu/purchasing>

P.1 We have a created a comprehensive inventory of office and other consumable supplies to avoid over-ordering.

Reducing excess orders reduces the waste associated with manufacturing and delivery of these supplies that are not needed. It also reduces the unnecessary costs associated with maintaining stores of extra supplies.

Instructions: How to create a comprehensive supply inventory:

1. Review existing stock and create a list of what you currently have. Be sure to look in all storage locations and back corners for excess. Consider including office supplies, kitchen supplies, and anything else purchased regularly for the office. Consider asking office members to clean out their desks of excess before the inventory is conducted.
2. The list should be in a form that can be easily updated as supplies run out and new supplies are ordered.

3. Ensure purchasing staff review the list before purchasing additional stock. If your office has multiple purchasers, ensure that each has access to the list and can update it as orders are made.
4. Make it standard procedure to update the list every time supplies are ordered and used.

P.2 We commit to consolidate orders so that we do not make single item purchases:

- a) *Less than \$50*
- b) *Less than \$100*
- c) *Less than \$200*

Order consolidation reduces transportation emissions, packaging, fuel usage, and carbon emissions.
NOTE: Orders of \$200 or more receive a 2% point-of-sale discount from Office Depot.

Instructions: How to consolidate orders:

1. Inform office purchasing and office members of your goal and why this is important.
2. Ask purchasing to keep track of order requests until they reach the desired total. Remind them not to make individual orders but rather to only place orders at or above the desired minimum.
3. Depending upon your office's purchasing needs, this may simply mean placing orders once a week or every two weeks. Selecting a standard day for ordering can also help office members anticipate and plan around ordering times.

P.3 We purchase copy, computer, and fax paper with a minimum:

- a) *30% post-consumer waste content OR*
- b) *100% post-consumer waste content*
- c) *AND Chlorine-free*
- d) *AND Forest Stewardship Council (FSC) certified*

P.4 We purchase letterhead, envelopes, and business cards with a minimum:

- a) *30% post-consumer waste content OR*
- b) *100% post-consumer waste content*
- c) *AND Chlorine-free*
- d) *AND Forest Stewardship Council (FSC) certified*

P.5 We purchase janitorial paper (toilet paper, tissues, and paper towels) with a minimum:

- a) *30% post-consumer waste content OR*
- b) *100% post-consumer waste content*
- c) *AND Chlorine-free*
- d) *AND Forest Stewardship Council (FSC) certified*

P.6 We purchase folders, notepads, post-its, or other paper products with a minimum:

- a) *10% post-consumer waste content OR*
- b) *30% post-consumer waste content OR*
- c) *100% post-consumer waste content OR*

P.7 We have replaced solvent-based permanent ink markers/pens with water-based ones.

P.8 We purchase only recycled or remanufactured laser and copier toner cartridges.

P.9 We require our external printing contractor to use:

- a) *Vegetable-based inks for all publications*
- b) *Paper with 30% post-consumer waste content*
- c) *Paper with 100% post-consumer waste content*
- d) *Forest Stewardship Council (FSC) certified*

Instructions:

Visit Penn Print and Interactive Communications: <https://cms.business-services.upenn.edu/publications/> or Wharton Printing: <https://printing.wharton.upenn.edu/>

When placing your order remember to specify the use of vegetable-based inks (ex. soy) and recycled paper content.

P.10 We ask our designer to design publications that require fewer varnishes and coatings, and can be easily recycled.

Reducing varnishes and coatings reduce the use of chemicals associated with these materials. Ensuring your product is easily recycled is important to helping the University reach its recycling goals as stated in the Climate Action Plan.

Instructions: Visit Penn Print and Interactive Communications: <https://cms.business-services.upenn.edu/publications/> or Wharton Printing: <https://printing.wharton.upenn.edu/>

To create recyclable publications:

1. Talk to your publication designer regarding the type of publication, planned binding that should be utilized, and the desire for fewer varnishes and coatings.
2. Review the publication's printing specifications to make sure it is aligned with your desires and your discussions with the designer.
3. Work with the printer to ensure that they can print the documents meeting all of your specifications and cost requirements.

P.11 For new office furniture:

- a) *We reuse furniture from Ben's Attic before purchasing new office furniture.*
- b) *We buy refurbished furniture.*
- c) *We buy new furniture with at least 50% recycled content.*

Recycled, reused, and refurbished furniture reduces the use of raw materials and energy required to create new furniture. Local reuse also reduces the energy associated with transporting furniture to campus.

Instructions: Visit ben's attic:

To purchase products from an approved vendor, visit the Penn Green Purchasing website: <https://cms.business-services.upenn.edu/purchasing/>

P.12 All of our computer purchases meet at least EPEAT silver standards.

EPEAT®-registered products meet strict environmental criteria that address the full product lifecycle, from energy conservation and toxic materials to product longevity and end-of-life management. EPEAT-registered products offer a reduced environmental impact across their lifecycles.

Instructions: Search the EPEAT Registry for the type of computer and size you are looking for to see what the available options are that are silver or gold certified OR check the certification of the computer you want to purchase by going to the search site: <https://www.epeat.net/>

P.13 Any new equipment we purchase is ENERGY STAR rated, if applicable. If ENERGY STAR is not available, we work with our vendor to purchase the most efficient option.

ENERGY STAR rated equipment uses at least 40% less energy, saves money, and helps protect the environment. These devices also run cooler and last longer than standard machines. The ENERGY STAR label identifies products that deliver the same or better performance as comparable models while using less energy and saving money.

Instructions: The Green Purchasing website has a guide to help identify ENERGY STAR products offered by Penn approved vendors: <https://cms.business-services.upenn.edu/purchasing>

EVENTS

For help with this section, it would be useful to visit catering@penn.

V.1 We have the caterer provide drinks, snacks and meals in bulk rather than individual containers and avoid purchasing cardboard or plastic boxed meals.

Bulk containers reduce the excess waste associated with individual packaging.

Instructions: Ask your caterer to provide drinks and snacks in bulk containers and avoid individually packaged drinks and snacks. Ask your caterer to provide meals on family style trays rather than in individually packaged meals. Serve food buffet style and ask one of the local, sustainable caterers to supply their own reusable products for your event or meeting.

V.2 We use caterers that source locally grown produce.

Locally grown produce requires less energy to be transported from the farm to Penn.

Instructions: Ask your potential caterers whether they use locally grown produce.

V.3 We include at least 50% vegetarian or vegan options in all our orders.

Vegetarian and vegan menu options, being meatless, typically require less energy to grow the meal components than meat-based menu options.

Instructions: Ask your potential caterers for their vegetarian and vegan options. Order vegetarian or vegan options for at least 50% of the meals ordered.

V.4 At least 50% of our events or conferences are paper-free; we only provide materials electronically.

Paper-free events represent a strong office commitment to sustainability and provide an opportunity to show your guests your dedication to reduce waste.

Instructions: Provide materials, such as an agenda or PowerPoint presentations, via email in advance or on the event website. Ask attendees to print only when necessary. Project the agenda and other relevant materials on a screen in the meeting room or throughout the space

V.5 At our events and meetings we use reusable or compostable cups, dishware, and utensils and provide proper recycling, refuse and composting at all of our events to reduce the amount of waste going to landfills.

Reducing consumption of disposable cups, plates, and utensils cuts down on the resources and energy used to produce these items and reduces Penn's contribution to the landfill.

Instructions:

1. Purchase reusable cups, dishware, and utensils for office use. Alternatively, purchase compostable cups, dishware, and utensils for office use. Inform the office of the new supplies and their locations.
2. When using a caterer, ask a local, sustainable caterers to supply their own reusable products for your event or meeting, or to provide a fully compostable alternative.
3. Include signage for guests on what materials go in each bin.

Visit Penn Purchasing Services: <https://cms.business-services.upenn.edu/purchasing/>

V.6 We only purchase giveaway items/prizes that are made of recycled material or that are a reusable item that replaces a disposable one (e.g. reusable coffee cup).

Instructions: Look at the recycled content of materials when purchasing prizes, and consider items that will be useful as well as reusable.

ENERGY

E.1 We have control over our thermostat and keep it set at 68 for heating and 78 for cooling.

Maintaining the 68/78 temperature settings saves energy by preventing over heating or cooling the office space.

Instructions: If your office controls their own thermostat, assign one person to monitor the thermostat and regulate the temperature as per the above settings. Inform the office of the new policy and remind members to dress appropriately.

E.2 We have coordinated with our Building Administrator to identify areas that do not require heating and cooling during off-hours, breaks, or other periods of time.

Removing areas from unnecessary thermal control can result in significant energy savings, particularly during weekends and extended break periods.

Instructions: Work with your office Building Administrator to identify appropriate spaces. Building Administrator Listing: <https://www.facilities.upenn.edu/contacts/building> (search by building)

E.3 We leave clear space in front of all our radiators and vents.

Intent: Leaving radiators and vents clear allows for better airflow within the office. This allows the radiators and vents to heat and cool the space more efficiently, using less energy and also saving the office money.

Instructions: Inform your office of the new clear space policy and ask for their help and cooperation in keeping these areas clutter free. Identify one person in your office who can be in charge of regularly checking radiators and vents to ensure that they are not blocked and open space is maintained around them.

E.4 We have designated a person to report all complaints and temperature fluctuations in our office.

Penn Facilities continually works to address temperature fluctuations and issues in campus buildings. However, they cannot address issues they are not aware of. It is most efficient if these issues are collected by one office member and reported together.

Instructions: Identify one person within your office who can collect office complaints about temperature issues and fluctuations. This person should regularly report these issues to the Building Administrator so they can work with Facilities to fix them where possible. Consider having this position rotate regularly.

Resources: Building Administrator Listing: <https://www.facilities.upenn.edu/contacts/building> (search by building)

E.5 We examined our office's use of networked printers with respect to managed print and have worked with our IT groups to consolidate use.

Electronic devices use energy when plugged in, even when they are off, so taking these devices offline will reduce energy consumption. Reducing excess printer and copier capacity can have a significant impact on energy consumption. Printers and copiers account for 20-25% of office electricity use.

Instructions: Contact your IT support to discuss use evaluation and consolidation. Consider whether there are printers that are only used a few times a day or if there are any unnecessary desktop printers. These are examples of potential opportunities to eliminate a printer and still have sufficient capacity. You may also consider keeping the extra printer(s) unplugged except for times of larger print volumes if they are not used daily but the office does have occasional instances when it needs higher capacity.

- IT support for staff: <https://www.isc.upenn.edu/resources/staff>
- Green IT website: <https://www.isc.upenn.edu/green-it>

E.6 We have sleep mode and auto-off enabled on all copiers and all printers.

Sleep mode uses less energy than a full power state for these devices, and because many are used infrequently throughout the day, significant energy and money can be saved by allowing them to fall into sleep mode while idle. Sleep mode also helps these devices last longer. ENERGY STAR copiers should be enabled to go into low power mode after 15 minutes of inactivity and "auto-off" after 90 minutes, or less, of inactivity.

Instructions: Contact your school's IT coordinator to set up sleep mode and auto-off on communal copiers and printers.

- IT support for staff: <https://www.isc.upenn.edu/resources/staff>
- Green IT website: <https://www.isc.upenn.edu/green-it>

E.7 We enabled the recommended power management settings on our computers. We shut off our monitors and/or manually send our computers into energy saving modes (standby or hibernate) when not in use.

A PC in idle mode eats up the same amount of energy as in full-power mode. However, if you put your PC in power saver mode, you save energy and money. In case of a power failure, you might lose all the unsaved data on an idle PC. However, your documents remain safe in power saver mode, even during power cuts, as they are saved to the computer memory or hard disk and can be opened easily. Computers in energy saving modes use 2% of the energy used when at full power.

Instructions:

1. Go to the Start menu.
2. In the bottom right hand corner will be a standby icon and an arrow. Click the standby icon to set the computer to standby mode. Or, click the arrow so a list appears, shut down and hibernate will be two of the listed options.
3. Contact your IT support to enable power management settings if you do not have permission.
 - IT support for staff: <https://www.isc.upenn.edu/resources/staff>
 - Green IT website: <https://www.isc.upenn.edu/green-it>

E.8 We have arranged with our IT group to be able to shut down our computers at night and it is now office policy to shut down computers at the end of the workday.

Intent: Computers continue to draw electricity while in sleep mode. For example, a desktop computer may draw on average 74 W when on and idle; it still draws 21 W when in sleep mode. When turned off (and still plugged in) the average draw drops to 2.8W.

Point Value: 4 points

Instructions:

1. Identify the hours during which the computers in your office are in use. For example, the first staff arrive starting at 7:30 and the last leave around 6:00. If this is the case, then there is an opportunity to implement an computer shut down policy.
2. Contact your IT staff to discuss what their needs for updating computers are. Work with them to arrange regular update times when either they can centrally turn the computers on or users can leave on the computers. A trial period or pilot project may need to be utilized before full implementation to work out specific operational details.
3. Create a policy that documents the procedures for staff to follow and inform every one of the new policy and procedures.
 - IT support for staff: <https://www.isc.upenn.edu/resources/staff>
 - Green IT website: <https://www.isc.upenn.edu/green-it>

E.9 We have converted or are converting our office to virtual desktops 9

Intent: Virtual desktops eliminate the need for CPUs at every desk, reducing the energy use per desk, the amount of material and energy used to produce and dispose of CPU's, thus reducing the life-cycle costs involved in operating an office full of computers.

For a standard desktop that is used Monday through Friday and left on over the weekend so the user can dial in remotely, they are using a base of 50 watts, with a peak of 85 watts when in use (processor at 80%). In contrast, the virtual desktop client only uses 12 watts, which does not change with usage patterns. A standard desktop uses about 10 KWh a week, while the virtual machine uses 2.02 KWh per week, about 1/5th the electricity use.

Instructions: Converting to virtual desktops is a significant investment, which may not be applicable for all office situations. It is also something which cannot be done overnight and is best handled at a school or center level. It is a project that needs to be driven and managed by the IT department.

Talk with your IT staff to see if it is something they have thought about and whether they feel it would be beneficial for the office. If so, find out what type of support from the office they feel would be beneficial in moving this forward.

- IT support for staff: <https://www.isc.upenn.edu/resources/staff>
- Green IT website: <https://www.isc.upenn.edu/green-it>

E.10 We use power strips to control energy use.

- a) We use “smart strips” for electronics, chargers, and appliances/devices with digital clocks and program them to shut off each night.*
- b) We use power strips and surge protectors with an on/off switch for electronics, chargers, and appliances/devices with digital clocks and switch them off each night.*

Most electronic devices, chargers and any device with a digital clock continue to use electricity when turned off. These are referred to as “vampire” loads and account for 10-15% of commercial energy use. Turning off power strips is the equivalent to unplugging the devices, and eliminating the “vampires.”

Instructions: Identify the type of power strip you want to use for your office. There are some with switches available through Office Depot, at this time, “smart strips” need to be purchased externally. Some sources are listed in the resources section. Different strips may be best suited for different groupings of devices, depending upon location and the type of access or control available.

Visit Penn Purchasing Services: <https://cms.business-services.upenn.edu/purchasing>

E.11 We encourage our staff to recycle or donate old computer equipment.

Intent: Computer equipment is updated and made more efficient with each new model. Recycling the energy “hogs” among your computer equipment can significantly reduce office energy use.

Instructions:

- a) Ask staff to identify if they have:
 - a. Computer monitors that are more than 8 years old,
 - b. Computers that are more than 4 years old, or
 - c. Printers that are more than 5 years old.
- b) Create a list, from oldest to newest, of equipment that should be replaced or budgeted for replacement.
- c) When new equipment is purchased, require the user to recycle the old equipment before they can receive the replacement. See the electronics recycling tips under the waste section for more information.

E.12 We send, or will send, an e-mail to our staff before holidays and breaks containing an energy saving checklist for leaving their office.

Unplugging electronics over extended breaks reduces energy consumption as many of these devices continue to use a small amount of energy while powered off but still plugged in. Closing blinds will reduce energy loss through windows and excess heating from direct sunlight.

Sample Checklist:

- Unplug electronics at the source
- Turn off all lights
- Close all blinds
- Close windows tightly, including storm windows if you have them.
- Turn down air conditioning (raise temperature) and heating (lower temperature) if you have the controls.
- Tightly turn off faucets and report any leaks
- Water plants
- Contact IT staff for assistance where necessary.

Resources:

- IT support for staff: <https://www.isc.upenn.edu/resources/staff>
- Green IT website: <https://www.isc.upenn.edu/green-it>
- Facilities Service Request: www.facilities.upenn.edu/serv_repair.php

E.13 We have converted all lights to LEDs or CFLs.

Energy efficient bulbs can use up to 75% less energy while producing the same amount of light output. They also last six-ten times longer, and can reduce energy bills.

Instructions: If you would like to convert to more efficient lighting but have not yet, see below. See below.

E.14 We have worked with our Building Administrator to assess overhead lighting lumens/foot-candles in the office and switch to more energy efficient bulbs where possible.

Instructions:

- a) Contact your Building Administrator to set up a time to assess overhead lighting and identify places where you could consider switching to more efficient options.
- b) Work with your Building Administrator to make a plan for making the lighting changes deemed appropriate.

Building Administrator Listing: <https://www.facilities.upenn.edu/contacts/building> (search by building)

E.15 All of our workstations and desks have task lights fitted with CFLs or LEDs, which we use when working after hours, times that the office is mostly empty, or other times when full overhead lighting is not necessary.

Turning off overhead lights and using only the necessary lighting can reduce energy use and energy bills.

Instructions:

1. Purchase individual lights for all desks and workstations.
2. Identify times and areas where overhead lighting can be turned off.
3. Create an office policy that overhead lighting should be turned off at designated times, when the office is mostly empty, or when full overhead lighting is unnecessary.
4. Inform the office of this policy and ensure individuals have appropriate lighting to complete their work without overhead lighting.

To purchase task lights, visit the Penn Green Purchasing website: <https://cms.business-services.upenn.edu/purchasing/sustainable-purchasing/how-to-buy-green.html>

Building Administrator Listing: <https://www.facilities.upenn.edu/contacts/building> (search by building)

E.16 We turn off lights and use natural lighting when possible and have posted prompts near light switches to encourage energy conservation.

Turning off lights and using natural lighting is more energy efficient and reduces energy costs.

Instructions: Remind staff to turn off lights when sunlight is sufficient to light spaces. Assign someone in the office to turn off lights when daylight is sufficient. Consider making this a rotating position. Post reminder signs on common area light switches to remind users to turn out the lights when they are unnecessary. Reminder signs can be found here: www.upenn.edu/sustainability/resources/posters.html

E.17 We prioritize closing and opening blinds/shades to allow heat in, trap heat, or reduce heat capture in winter or summer. We have appointed an individual to be responsible for opening and closing them every day.

Shades & blinds can be used to reduce excessive heating of office space in the summer and reduce excessive heat loss from office space overnight during the winter. This can also reduce the energy needed to maintain the appropriate temperature in the office and increase occupant comfort.

Instructions:

1. Identify the parameters or decision factors for blind/shade use, ex. time of day, weather conditions, etc.
 - In summer – close blinds during the day to prevent excess heat capture.
 - In winter – open the blinds during the day to allow the sun to warm your space. Close the blinds in the evening to trap heat in the building.
2. Document the parameters and decision factors in a policy.
3. Identify a person in the office (and a backup) responsible for operation of blinds/ shades.
4. Inform staff of the new policy.

E.18 Microwaves, coffee makers, small appliances, printers, copiers, etc. are unplugged at night by a designated person or are programmed to shut off through a timer or plug load controller.

Most small appliances, electronics, and any device with a digital clock continue to use electricity when turned off. These are referred to as “vampire” loads and account for 10-15% of commercial energy use.

Instructions:

1. Identify the appliances to be unplugged or programmed to shut off.

2. Determine whether you will be unplugging appliances or programming them to shut off through a timer or plug load controller.
3. If you are unplugging appliances manually, identify a person in the office (and a backup) responsible for this task. If you are programming appliances, ensure you have the proper equipment, or purchase the necessary materials.
4. Make sure new equipment is incorporated into the system you establish here.

Resources: Penn Purchasing: cms.business-services.upenn.edu/purchasing/

E.19 No one uses space heaters in our office.

Space heaters are considered energy hogs with very good reason. The smallest electric space heaters can use about 10,000 BTUs per hour. Larger electric space heaters may use over 40,000 BTUs per hour. In addition, using space heaters can throw off the central heating control sensors and create an uncomfortable temperature environment for others in the office.

Instructions:

1. Create a policy prohibiting use of space heaters in your office. Have a person designated as the “space heater reminder”. This should alternate among different staff people on a regular basis (e.g. monthly).
2. Inform all staff of the new policy by email and in person at a staff meeting.
3. Identify all current space heaters and ask the staff person to remove it from the office.
4. When a space heater is found to be in use, the designated person should remind the staff member that space heaters are prohibited and ask them to remove it from the office.

WATER

R.1 We have had facilities install a kitchen, bathroom or lab sink aerator with on/off lever that does not exceed 1.5 gallons per minute.

Aerators reduce water flow, saving 30% more water and energy than regular water flow.

Instructions: Talk to your Building Administrator about installing a sink aerator in your kitchen. If they agree, they will need to put in a work order to Facilities for an aerator to be installed. Building Administrator Listing: <https://www.facilities.upenn.edu/contacts/building> (search by building)

R.2 We have designated a person to report any sink leaks (kitchen, bathroom, or lab) to the Building Administrator immediately.

Sink leaks can waste a lot of water. Reporting them quickly reduces water waste and ensures they are fixed in a timely manner.

Instructions: Designate one person to be in charge of reporting leaks. Inform staff of this position and remind them to report all leaks immediately to this person. The designated person reports leaks to the BA immediately so they can be fixed. Building Administrator Listing: <https://www.facilities.upenn.edu/contacts/building> (search by building)

HUMAN HEALTH & INDOOR ENVIRONMENTAL QUALITY

H.1 In our kitchen, we use dishwashing soap and all-purpose cleaner in place of harsh chemicals.

Environmentally preferable dish soap is less toxic to the user. Environmental soaps are also nontoxic, biodegradable and hypoallergenic, and free of petroleum-based cleaners and phosphates. Kosher-certified dish liquid soap is not tested on animals.

Instructions: Work with your cleaning staff and purchasing to choose environmental alternatives, such as the one listed below. Approved Soap: www.officedepot.com/a/products/299590/Seventh-Generation-Natural-Liquid-Dish-Soap/

Visit Penn Green Purchasing: <https://cms.business-services.upenn.edu/purchasing/sustainable-purchasing/how-to-buy-green.html>

H.2 We have at least one plant per 2-5 people in our office.

Office plants reduce stress and increase productivity. Plants improve indoor air quality, reduce office worker sickness.

Instructions: Work with staff and purchasing to choose office plants suitable to your office environment. Remember to consider the amount of available sunlight in each location. Also consider how often the plants will need to be watered or cared for. Determine whether each employee will be responsible for their own plants or whether one person or a committee of people will be responsible for caring for all plants.

H.3 We have walk off mats at the entrance to our office or department.

Walk off mats collect dirt and excess moisture at the entrance. In doing so, they can help reduce slips and falls in the office and improve indoor air quality.

Instructions: Determine if your office lacks walk off mats at any entrance and work with purchasing to get the appropriate mats for these locations.

Visit Penn Green Purchasing: <https://cms.business-services.upenn.edu/purchasing/sustainable-purchasing/how-to-buy-green.html>

TRANSPORTATION

T.1 Members of our office are aware of sustainable transportation resources at Penn and in Philadelphia. Information about the applicable programs is displayed permanently in the office, and shared regularly at meetings or via email.

Making employees aware of alternative transportation programs available can lead to increased use of alternative transportation and reduced single car travel to and from the school. Walking, biking, public transportation, and car pooling all reduce vehicle miles travelled, associated emissions and congestion.

Instructions: Post maps and program information in a central location. Assign someone to keep the information up to date. Inform employees of sustainable transportation options.

- Campus transportation information: www.upenn.edu/services/transportation.php
- Penn Transit Services: cms.business-services.upenn.edu/transportation

- Car Share: cms.business-services.upenn.edu/penntavel/preferred-vendors/ground-transportation/car-sharing.html
- Bike Share: www.rideindego.com
- Bike Maps: www.bicyclecoalition.org/resources/maps
- SEPTA - public transit on, around, and to campus can be found here: www.septa.org
- LUCY LOOP - SEPTA's Loop around University City: www.septa.org/schedules/bus/pdf/LUCY.pdf

T.2 There is bicycle parking located convenient to our building. If not, we contacted Facilities/Operations at our school/unit to see if relocating existing bike racks or obtaining new racks is a possibility.

Adequate bike rack spaces make it easier for staff members and visitors to bike to the office. Ideally, this reduces the number of people driving cars to the office, thus reducing greenhouse gas emissions.

Instructions: The University is moving bike racks away from buildings and out to the perimeter of campus to dissuade people from biking in the campus core, which is potentially dangerous to the large volume of pedestrians in this area. Use the campus map and bike rack list below to find bike parking closest to your office. Current bike parking locations on campus: www.facilities.upenn.edu/map.php

If you feel bike parking underserves your office, email sustainability@upenn.edu to discuss the possibility of obtaining new racks. Please include 'Green Office' in the subject line.

Review the bicycle policy on campus: www.upenn.edu/provost/PennBook/bicycle_policy

T.3 We offer telecommuting opportunities and/or flexible schedules so workers can avoid heavy traffic commutes.

Reducing vehicle miles travelled through telecommuting or reducing time spent in vehicles in traffic are ways to reduce air pollution emissions associated with commuting to and from work.

Instructions: Review Penn's Flexible Work Options information at www.hr.upenn.edu/quality/worklife/flexoptions/default.aspx

Work with your office management to identify flexible work options that will enable the office to achieve its goals and functions, meet employee needs and desires and reduce the carbon emissions associated with employee commutes.

T.3 We prioritize train or bus use over flying or driving for work-related travel.

INVOLVEMENT

I.1 This department, school or center has a sustainability coordinator or similar position.

Sustainability coordinators have promoting and implementing sustainability at the school or center in their job description.

Instructions: If your department, school, or center has a sustainability coordinator, you can claim credit for this action.

I.2 This office has a Green Team that works with a Staff Eco-Rep in our school or center.

A Green Team can help promote and coordinate your office's efforts to complete the Green Office Certification.

Instructions: Create a team of people who can spearhead your office's environmental efforts.

I.3 This office or department has an Eco-Rep that regularly attends meetings.

The Staff & Faculty Eco-Reps Program is a peer education program that provides tools to improve the sustainability of Penn offices and labs. Designed to improve environmental awareness and behavior change, the program builds knowledge and leadership across Penn's Schools and Centers by empowering individuals to champion the goals outlined in the Climate Action Plan.

Instructions: Visit the Penn Staff Eco Rep website and fill out the application. Following this, start attending meetings and getting involved. The Staff and Faculty Eco Rep program lives on <https://sustainability.upenn.edu/>

I.4 We have information about our office's environmental efforts, resources and Green Office actions posted in an easily visible location for staff and visitors to see.

Education and information ensure all staff and visitors are aware of the environmental efforts and help increase participation.

Instructions: Use information that makes the most sense for your office. Assign one person to collect information and regularly update the board. Periodically send an email to all staff to share information if they have anything new.

Sample Reminder Notice:

Our office is taking part in the University's Green Office program and we need your help taking several steps towards becoming a greener office. Remember to reuse, reduce, and recycle your waste in the office. Labeled recycling bins are now located in all office common spaces. For a complete list of green steps our office is taking please speak with our GOPenn contact, XXXXX. Thank you for helping our office reach its sustainability goals!

I.6 We recognize staff members for their environmental stewardship efforts.

Recognition can help foster an office atmosphere of support and engagement, encouraging increased participation. It can also reward especially committed staff members for their hard work and dedication.

Instructions:

1. Determine whether it makes sense to reward staff at regular intervals or only when notable contributions occur. Larger offices may consider more regular rewards as this can encourage staff to increase participation.
2. Determine the type of reward - certificate, gift certificate, etc., whatever is most appropriate for your office.
3. Create a committee to manage the process monthly or quarterly, or consider assigning this task to an Eco-Rep or manager.
4. Award winners at staff meetings or other all staff events. Announce winners in office publications and on office bulletin boards, if applicable.

I.7 Our office has hosted or attended a Sustainability 101 presentation and/or encourage staff members to take the Sustainability 101 Workday Training.

Bringing your entire staff to a basic level of sustainability understanding is important to increasing participation in green office practices. It will make it easier to explain how and why you are achieving Green Office certification.

Instructions: Contact sustainability@upenn.edu for a copy of the Penn Sustainability 101 presentation. Consider asking your office Eco-Rep or a member of the Office of Sustainability staff to give this presentation and answer questions at your office.

I.10 We hold or participate in sustainability events at least annually (e.g. Green Day, Green Happy Hour, Bike/ Walk to Work Day, Climate Week and Earth week, etc.).

Participating as an office in a sustainability event builds not only awareness but also a sense of camaraderie among staff and allows them to have fun together around sustainability issues

Instructions:

1. Research some events that the office may be interested in holding or attending. The sustainability at Penn website is a great place to start. Some annual Penn-wide events include:
 - a. Climate Week at Penn
 - b. Earth Week
 - c. Creating Canopy
2. Share information on relevant events at a staff meeting.
3. Make group decisions on which to undertake. Not every staff members needs to actively participate, but can provide support and encouragement for those who do.
4. Identify one or two organizers for the event.
5. Don't forget to thank the organizers afterwards.

I.11 We have solicited feedback from office members about sustainability practices we have or could have in our office and shared this feedback with our Building Administrator.

Encouraging all staff to participate and provide advice and feedback improves participation and increases awareness.

Instructions: Designate one person to collect feedback and submit it to the Building Administrator. In a staff meeting, request that staff provide feedback on green building features and suggestions to the designated person. Give them a deadline to make the process more recognizable for both the designee and the BA.

Resources: Building Administrator Listing: <https://www.facilities.upenn.edu/contacts/building> (search by building)

I.12 We inspired another office to pursue Penn Green Office Certification

Encouraging other offices to participate helps increase awareness about the program and improve the overall sustainability of the Penn campus.

Instructions: Talk to staff at other offices and inform them of your office's commitment to sustainability and the steps you are taking to reach your sustainability goals. Encourage them to participate. Consider

offering to attend a staff meeting at another office to talk about your office's experience with the Green Office program and answer their questions and concerns.

Appendix

1. Office Clean-out Guide

STEP 1: PLAN AHEAD

Determine the best date for an Office Clean Out. Decide the scale of your clean out (your office, certain departments, entire floor). Housekeeping will try to accommodate the desired date, but it may need to be adjusted due to resourcing constraints (additional containers, etc).

STEP 2: CONTACT FACILITIES AND REAL ESTATE SERVICES

Contact FRES for Housekeeping support - Use Facility Focus to contact FRES Housekeeping for support to remove material from your office and to provide large containers to collect recyclables - http://www.facilities.upenn.edu/serv_repair.php. You can also call the Work Control Center for this request.

STEP 2: OBTAIN ADDITIONAL RECYCLING CONTAINERS

Regular office recycling containers - Order from the Penn Markplace's online catalog.

For recycling specialty items

- Batteries - Your office can use the Big Green Box program to recycle portable electronics and all batteries, including alkaline. The Big Green Box is shipped to your office pre-constructed. Once the box is full, drop it off at any FedEx shipping location to have the contents recycled. Shipping costs are included in the initial price of the box. You can also find a drop off location for these items through <http://www.call2recycle.org/>.
- Pens/Pencils - All brands of pens and markers are acceptable - For every writing instrument that Penn recycles, the University will receive two cents (\$0.02) which will be designated to the new Green Fund. <http://www.purchasing.upenn.edu/green-initiative/sanford.php>
- Printer Toner/Inkjet cartridges - If you need a collection box for used ink and toner cartridges, simply request to Telrose Corporation Customer Service and a box will be delivered to you free of charge. <http://www.purchasing.upenn.edu/green-initiative/green-g.php>
- Unneeded furniture and equipment - Offer to the Penn Community using Ben's Attic! See <https://upenn.unl.edu/>
- Computers, Printers and other Electronics - Separate out and arrange for e-waste pick up! See <http://www.upenn.edu/computing/greenit/equipment.html> for more info
- Excess Single-sided printed paper - During your clean out, collect single-sided printed paper. You can take this to the Campus Copy Center to be made into notepads. www.campuscopycenter.com
- Shredding confidential items - Confidential items that will need to be shredded

STEP 3 LET PEOPLE KNOW

Notify your office colleagues of the office clean out via email, staff newsletter, meetings. Be sure to include what items they can recycle.

Questions? Need Help? Contact sustainability@upenn.edu