



***COLLEGE HOUSE
SUSTAINABLE
LIVING GUIDE
for
RAs and GAs***



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INTRODUCTION

As a College House Resident Assistant (RA) or Graduate Associate (GA), you have a special opportunity to help frame the mindset of your residents, so that they may choose to pursue a more sustainable lifestyle on Penn's campus.

While every House has a unique culture, distinct building structure, and individual action opportunities, one thing remains the same: we are all leaders capable of making a difference in the lives in our College House residents.

Empowering 6,600 undergraduate students in the College House system with information about Penn's environmental initiatives and green living tips on can make a significant difference in their lives now and in the years to come. For most students, their freshman year is the first time they are living on their own; they are forming long-term lifestyle choices and habits. We have the opportunity to educate future global citizens to live their lives in a sustainable fashion.

Learning in the context of the College Houses has great potential payoff because it is specific, situational, and social. Teaching sustainability in your residential setting can establish conditions conducive to continual development, including opportunities to learn from others and the daily fostering of current and future leaders. You may be wondering how to turn these great ideas into actionable practices within your College House. This RA/GA Manual, produced by Penn's Green Campus Partnership (GCP) is a resource for inspiration and facts on sustainable living. As an RA or GA selectively chosen from a large pool of candidates, you have a special role to perform in your House and at Penn. Your leadership is significant. Do your part!



1. Involve Your Peer RA/GA Staff Members in House Sustainability

Once your House Training and CHAS Training have taken place, chances are, you'll know your peer RA/GA and House staff members very well! One of the best parts of this camaraderie is the knowledge sharing that naturally unfolds during meetings and unstructured time. Not only can you be a resource to your floor residents, but you have the power to guide your fellow RA/GA staff to learn about sustainable living choices.

Share Best Practices

Recently discover an excellent restaurant or favorite product? You probably won't be shy to tell your friends about it. The same practice can be useful when it comes to lifestyle decisions regarding sustainability. Let your co-workers know about chemical-free cleansers, local organic eateries, or your new notebooks made from post-consumer content!

Share Green Topics at Meetings

Do you have a regular College House Staff gathering? Think about approaching your House Dean or Senior Staff members to see if you can lead a sustainability discussion at an upcoming meeting or potluck! By staying current with the news and trends, you shouldn't have trouble finding meaningful and relevant topics to share with your peers to engage them in an environmentally-based discussion.

Ensure your Staff Meetings are Green Meetings

Green meetings are based on a sustainability framework which balances environmental, economic and social impacts in context of an organization's business needs.¹ Here are some action items to consider when planning greener Staff meetings in your College House:

- Can you get the same business accomplished without using paper for meeting minutes?
- Would staff bring their own water bottles so there's no need to provide disposable cups?
- If food is being served, opt for buffet-style rather than individual servings to avoid waste.
- Choose a room with natural lighting, and be sure the windows are closed if HVAC is on.
- For many more suggestions, see Penn's "Green Events Guide" here:
<http://www.upenn.edu/sustainability/eventsguide.html>

Talk to Your Senior Staff about Promoting Sustainability Awareness

You might be surprised by the willingness of your House Dean to accept suggestions of green projects or program implementation. Don't be nervous to suggest a new designs to standing House traditions or provide thoughts on improving the sustainability of new events.

Consider how changing the status quo of could have multiple benefits, including:

- Less cost to use fewer items, or no cost for repurposing items already in possession
- Convenience of using tools already available in the House
- Saving labor by utilizing in-House expertise or interests of Staff members



¹ Green Meeting Industry Council, Best Practices, www.gmicglobal.org/?page=BestPractices

2. Lead By Example

Who has had a significant impact in your life? Who made you reflect upon your personal actions and consider alternative answers? In what ways did this influential person write, speak, and act? Why not put these same principles into action in your role as an RA/GA?

Role Model Sustainable Behavior in Personal Lifestyle Choices

When your residents notice you are shopping with reusable bags at the farmers' markets, cooking organic foods, minimizing waste, and recycling refuse, they will be intrigued by your chosen actions. Role models can be highly influential in conveying ethical standards, in both good and bad ways.² Don't be shy! Explain the reasons behind your positive model behavior! Portland State University is a highly acclaimed urban campus that is a "living laboratory for green practices", where students don't just read about sustainability but demonstrate what they learn by planting green roofs, testing solar arrays, tracking transportation systems, and more.³ The concept of Community Based Social Marketing (CBSM) is practiced here, and buy-in is successful. For more on CBSM, see page 8.

Tell People What You're Doing

It's necessary to understand that not everyone will jump on the "green" bandwagon immediately, but being able to provide reasons for making these changes is important. Why not...

- Make use of your hall bulletin board to put up flyers about campus events?
- Share sustainability facts on your personal or College House social media websites?
- Create a hall event that includes sharing and signing the GCP Sustainability Pledge? Check out: <http://www.upenn.edu/sustainability/pledge.html>
- For more on this topic, please see page 10.

Get Your Room "Green Room" Certified!

Penn's GCP recently instated a "Green Room" certification program for all student residents, both on and off campus! This self-administered survey guides reflection and encourages new sustainable behaviors. Waste minimization, energy and water conservation, green purchasing, sustainable foods, alternative transportation, academics, and community involvement are the bullet points – taken from the Climate Action Plan. You can be an excellent example of "green living" on your floor by completing Penn's new certification!

Note: This program is just rolling out, and will be modeled off of the Green Office Program: <http://www.upenn.edu/sustainability/greenoffice.html>. Check back soon for more details.

Take RA/GA Green Certification and Proudly Post Your Sticker

The optional RA/GA Green Certification takes place in late August, in conjunction with CHAS Training, and is a great way to network with RA/GA staff from other College Houses. You'll learn about Penn's unique Green Campus Partnership, Eco-Rep program, and physical features of sustainability on campus. This certification will also teach various techniques for encouraging resident involvement and leading green initiatives in your work. By participating in this session, you'll receive a special certification from Penn's Green Campus Partnership that you can hang outside your room. Show off your new green knowledge!

² Oregon State University, New study examines how role models influence ethical behavior, extension.oregonstate.edu/news/release/2006/01/new-study-examines-how-role-models-influence-ethical-behavior

³ Portland State University, 2012, Sustainability Education, <http://pdx.edu/sustainability/sustainability-education-0>

3. Educate Residents About Recycling

The 2011 Penn Climate Action Plan (CAP) Progress Report stated that the campus recycling rate increased from 20 percent in 2008 to 31 percent in 2011, reflecting individual and departmental behavior change spurred by ongoing efforts such as RecycleMania, PennMOVES, and composting by Penn Dining. The CAP calls for a campus recycling rate of 40% by 2014.⁴

What steps can you take to help the University achieve this goal?

Initial Floor Meetings: What, Where, Impacts

The first time you call your residents together is a great starting point for the discussion on proper recycling practices for your floor. Naturally, protocol will vary between Houses and potentially between halls within the same House. Verse yourself on the logistics of your personal recycling station, and be prepared to tackle questions that arise. If you're uncertain, empower your inquisitive resident with ownership of the recycling knowledge and ask them to report back when they find the right answer!



Since September 2010, Penn has used a single-stream recycling system. This means that all recyclable items (mixed paper, cardboard, glass, metals, and numbered plastics including grocery bags) can be placed together in the same container.

Special Items: CFLs, Batteries, Pens, Electronics

- Did you know that your College House has a drop bin for CFL bulbs and disposable batteries? By encouraging your residents to use these receptacles, you're helping to divert mercury and toxic elements from entering our landfills, rivers, rain, and ultimately our drinking water sources.
- Pens, pencils, highlighters, toothbrushes, plastic wrap, and many new items can now be recycled, through Penn's campus partnership with Terracycle. Ask your House Eco-Reps about their plan to incorporate Terracycle in your College House!
- Watch for flyers about e-recycling. Campus departments frequently have e-waste drives to collect and safely dispose of outdated or unwanted computers, printers, cell phones, TV's, etc.
- The Computer Connection at the Penn Bookstore will always accept empty ink cartridges to recycle and will soon roll out a program to give store credit for submitted e-waste!

Signage

Keep an eye on the recycling signs around your building, and utilize the Green Campus Partnership website to acquire extra when needed.

- Report buildings without recycling bins (sustainability@upenn.edu)
- For more info on recycling at Penn, see: http://www.facilities.upenn.edu/sustain_wast.php

Did you know? : Penn installed ten BigBelly solar-powered compacting trash cans with recycling bins along Walnut and Spruce Streets to increase the campus public recycling option.

⁴ Climate Action Plan, upenn.edu/sustainability/pdf/PENN_2011_Climate_Action_Plan_Progress_Report.pdf

4. Involve Your Hall in the Power Down Challenge

Buildings contributes to 30-40% of total global energy use⁵, and on Penn's campus, approximately 16% of all energy consumption is from College House activity. Furthermore, what we plug into the walls accounts for 37% of the energy consumed on Penn's campus.⁶ One way to initiate change towards a lesser environmental footprint of each resident is by involving your hall in the Power Down Challenge!

Competition Summary and Background

The Penn community annually participates in Energy Awareness Month with the Power Down Challenge each November. Join in the fun and encourage your residents to embrace this three-week competition to reduce unnecessary electrical consumption. The purpose is to increase consciousness about what each of us can do in our daily lives to help conserve energy. This initiative is part of Penn's larger commitment to reduce energy use by 17 percent by 2014, as outlined in our Climate Action Plan. The Penn Green Campus Partnership challenges all Houses to reach at least a 5% reduction, but the House with the biggest reduction will be the official winner. It's simple – reduce your electricity the most from your House's baseline, and you'll win the competition.

Suggestions for Spreading the Word and Encouraging Participation in Your Hall

- Grab "Power Down Challenge" posters from the GCP website and post strategically.
- Rally around some food at your next floor event to talk about actions each person plans to take during the Challenge. Have each resident commit to the others what they plan to do!
- Encourage residents to take the online Power Down Challenge pledge, or do it as a group. <http://www.upenn.edu/sustainability/powerdown/college-house.html#pledge>

Educate Residents about Personal Energy Management

- The GCP will distribute portable appliance meters to let students explore the energy use of items that plug into the wall: TVs, computers, game systems, etc. College House residents can make a request through the House Eco-Reps to borrow this equipment, to measure relative energy use.
- Calculate your personal carbon footprint, and share this information. See the U.S. EPA website: <http://www.epa.gov/climatechange/ghgemissions/ind-calculator.html>
- Best practices to cut energy use may include:
 - Turn off everything that's turned on; unplug all electronics when not in use, too
 - Dress for the season; wear a sweater instead of cranking the thermostat in the winter
 - Keep the blinds drawn on summer days to block heat gain, open blinds on winter days
 - Switch to CFL light bulbs which use 75% less energy and last up to 10 times longer
 - Keep the air conditioner vents unobstructed (no stacks of paper on the fan coil units!)
 - Report problems with heating and A/C to Facilities, so issues may be promptly remedied

Encourage Residents to Sustain Habits Beyond the End of the Power Down Challenge

The House that reduces electricity the most from baseline wins the competition, but the effects of the competition can translate into easy to follow daily changes in energy consumption choices.



⁵ Green Campus Partnership, Facts, www.upenn.edu/sustainability/powerdown/campus.html

⁶ Green Campus Partnership, Conserving Energy, www.upenn.edu/sustainability/energy.html

5. Work With Your House Eco-Reps

The College House Eco-Reps program is managed by full-time sustainability staff in Facilities and Real Estate Services and is an initiative of the Penn Green Campus Partnership. The goal is to educate student leaders to be ambassadors who will teach their peers to conserve energy, be less wasteful, and follow a holistic spectrum of green topics. Collectively empowering Penn's 10,000 undergraduates with facts and action suggestions for positive changes has the power to make a significant difference.



Brief Background of Eco-Reps Program

The Eco-Rep program was piloted in three College Houses in 2009 and has grown in depth and breadth each year. The “green lifestyles” program was created as a compliment to the University’s Climate Action Plan, and now includes all 11 residential College Houses, Sanson Place Houses, most Greek houses, Hillel, and the Athletics Department.

Who Are They; What Is Their Role?

All interested students can apply to the Eco-Rep program in the summer and early September, for potential placement for the academic year. The Eco-Reps are divided into their respective community groups and are responsible for developing programming and educational campaigns to teach their peers about Penn’s commitment to sustainability. This leadership position is strictly voluntary, and there is no monetary compensation. While the program trains about 120 students annually, each College House has about 6-10 Eco-Reps who develop programming around sustainability for their neighbors.

Acclimate to Unique House Culture

The College House Eco-Reps program focuses on raising awareness of environmental issues and encouraging sustainable practices inside the residential halls. Each College House presents different challenges and opportunities. You may choose to educate your Eco-Reps on the traditions, programs, and daily operations of your particular House and help the Eco-Reps to understand how they can be your ally, to work together on standing objectives.

Help with Event Ideas, Logistics and Advertisements

The Eco-Reps are informal volunteers who work within the context of your College House to implement new events or enhance standing programming. As an RA or GA in your House, you can be a helpful mentor for your Eco-Reps by welcoming their ideas, providing suggestions and logistical advice, and spreading the word of their programs, and assisting during their events.

Invite Your Eco-Reps to Staff Meetings and Outings

Include your Eco-Reps whenever possible; they can provide support to existing House programs and can educate House leaders, too! If possible, ask them to lead a discussion or give a presentation at an upcoming RA/GA meeting or mid-year retreat.

Partnerships with Other Existing House Groups

What established House traditions could be enhanced by the assistance of your Eco-Reps? Do you have a movie-watching series, monthly brunch, games night, or Café operation that could be a little “greener”? Consider your Eco-Reps as allies and partners for promoting sustainability at any of the programming opportunities in your College House.

6. Green Your Events

The events you host in your hall are individualized to your preferences, and thus provide unique opportunities to educate your residents. Events don't have to be "sustainability" events to get the point across! Think about incorporating compostable or recyclable products, avoiding Styrofoam and individual packaging, reducing meat consumption, buying local, reducing paper flyers, and finally, letting your residents know how the event is green!

Food

Very frequently, College House events incorporate food into the program. With so many options around campus, it's difficult to sort through the decisions. Locally sourced and organic foods have less of an impact on the environment, and often contain more nutritious benefits. For a list of nearby options, see "Green Acorn" certified vendors in the "Tell Your Residents" appendix.



Bon Appetit is Penn's contracted on-campus caterer, and is the largest restaurant company with a high level of commitment to socially responsible practices such as antibiotic reduction, cage-free shell eggs, trans-fat free oils, mercury awareness, food waste reduction, and fair trade chocolate, amongst many others.⁷ The company has won numerous prestigious awards including Ecological Society of America Corporate Award, and the Food Alliance Keeper of the Vision Award.

Waste

Events can easily create a large amount of refuse, but with smart choices, can be close to zero-waste!

- Ask guests to RSVP so you have an accurate estimate of attendance and do not over order.
- Incorporate a "BYOCUP" (Bring Your Own Cup, Utensils, Plates) policy on the floor.
- Make sure recycling bins (or composting if appropriate) are in place.
- Avoid use of landfill items during the event (Bon Appetit offers a composting catering option).
- Use technology to reduce handouts, and make sure all giveaways are either edible or useful!

Transportation

Private transportation can be necessary at times, but taking existing public transportation options can help alleviate extra carbon monoxide, particulate matter, and other pollution from entering the air we breathe. When bringing residents off-campus, consider the different transportation options available in Philadelphia, such as SEPTA, bicycling, and car-sharing. See the "Tell Your Residents" appendix for details on car-sharing and nearby transportation options.

Energy Conservation

Arrive to your event early to set up the room, and be sure the windows are closed if the heat or A/C is on. Remember to adjust the lighting to use daylight where possible and turn off unnecessary equipment. It's easy to set the tone here, and make this an educational moment as well!

Green Events Guide Pointers

For more information, see Penn's Green Events Guide: www.upenn.edu/sustainability/eventsguide.html

⁷ Bon Appetit Mgmt. Co. "Sustainable Food Services Initiatives" 2009, www.bamco.com/sustainable-food-service

7. Plan Events Around Sustainability Topics

As you start to plan floor or House events for your residents, keep in mind that there are many ways to host an enjoyable, social activity that can also include an educational lesson around sustainability. There are plenty of ways to be involved in the local community, and Philadelphia is not short of resources or locations for exploration. Additionally, Penn's distinguished faculty will usually welcome an invitation to educate our undergraduate students in residence, and there are probably ways to incorporate sustainability into set programming, with a little thought!

Community Service Projects

There are a multitude of places close to campus that could use a helping hand! For a budget-friendly floor event, consider volunteering in the green spaces of parks, elementary schools, or walking trails. The Schuylkill River Trail, Clark Park, John Heinz Wildlife Refuge, Bartram's Gardens and Woodland Cemetery are all unique, historical green spaces conveniently close to campus. Most organizations will warmly welcome your offer of assistance. An experience like this has an added benefit of building hall cohesion through teamwork!



Environmental Field Trips

Philadelphia's Mayor Michael Nutter has pledged to make Philadelphia the "greenest city in America" by 2015, thus there are many nearby environmentally-focused places to see.

- Take a trip to Philadelphia's Fairmount Water Works, a model for more than 30 other American water delivery systems.
- America's oldest natural history museum and a world leader in biodiversity and environmental research is here in Center City: The Academy of Natural Sciences of Drexel University.
- Student groups can schedule a tour of The Philadelphia Water Department's waste water plant and drinking water intake facilities.
- Many companies will give green tours: see the Delaware Valley Green Building Council database of local USGBC LEED-certified buildings: www.dvgbc.org/green_resources/projects
- Consider a fun day-trip activity; kayaking on the Schuylkill or tubing on the Delaware Rivers.
- Take a hike! Many jogging, walking, and hiking trails are within a few miles of campus.

In-House Faculty Dinners

Most Penn Faculty will welcome the chance to interact with residents in the College Houses. Last year the College House Eco-Reps invited Dan Garofalo, Penn's Sustainability Coordinator, to dinner at many Houses, where he was able to share information about Penn's building and power upgrades, discuss recycling news, and build positive energy around the GCP! Consider inviting professors from the departments of Vagelos Integrated Program in Energy Research, Earth and Environmental Studies, Wharton IGEL, and the Medical School Public Health Center. See the appendix for more on academics.

Incorporate Into Established Programming

Does your House have an event tradition where sustainability topics could be incorporated? How about watching environmental movies as part of a film series; or playing Quizzo, planting bamboo or giving away reusable bags at a late-night study break?! The GCP has plenty of resources that the Eco-Reps can borrow to bring to RA or GA-sponsored hall or House event.

8. Recognize Residents Who Are Setting The Example

Almost everyone appreciates being told they've done a great job – put the spotlight on your stellar residents and help them shine!

Public Recognition Goes a Long Way

Peer acknowledgment builds esteem and creates commonly understood values and attitudes towards positive behavior. For best results, intrinsic and extrinsic motivation should blend together to create continued dedication towards living a greener lifestyle on your floor.

So, how can you support your residents for the outstanding examples they create? Try:

- Posting a flyer near the elevators or sending an email to praise outstanding actions.
- Giving verbal praise to model residents at floor meetings.
- Allowing recognized residents to choose their favorite snack for an upcoming event.
- Finding other simple recognition opportunities such as a weekly “greenest resident” award.

Feedback Helps

Research on teaching effectiveness identifies a number of factors that contribute to student learning, including the leader's expertise and interest in the subject matter, his or her ways of connecting course content to students' frames of reference, clarity of organization and expectations for learning, and opportunities for interaction.⁸ By finding ways to connect with your residents both one-on-one, as well as in group settings, you'll be able to give pertinent feedback more frequently and applicably. Open communication goes a long way, especially in the living-learning College House environment.

Community Based Social Marketing

Behavior change is the cornerstone of sustainability, and environmental program planners share a common challenge: motivating individuals to adopt diverse behaviors that support sustainability.⁹ Studies show that education alone does not alter behavior, and conventional marketing can be effective in creating public awareness, but it is limited in its ability to foster change.

Community-based social marketing is based upon research in the social sciences that demonstrates that behavior change is most effectively achieved through initiatives delivered at the community level, directly involving participants in the benefits of a certain activity. This model involves responding to the wants and needs of individuals, while at the same time instilling group responsibility. Success will best be achieved through a collaborative team effort on the College House hall, where each person feels responsibility to the group. Delve deeper into fostering sustainable behavior: www.cbsm.com.



⁸ Center for Instructional Development and Research, depts.washington.edu/cidrweb/Bulletin/Learning.html

⁹ CBSM, Fostering Sustainable Behavior, www.cbsm.com/strategies/search

9. Involve Your Hall in PennMOVES

Mission and Statistics

PennMOVES began in 2008 as “Move Out Volunteers Engaging in Service” to collect items that Penn students choose not to take with them when they leave campus in the summer –in an effort to find a new local home for these reusable belongings. Clothes, furniture, kitchen gear, electronics are collected, sorted, and offered for sale, with proceeds going to Goodwill Industries. Rather than finding their way to the landfill, these items are sold to individuals and organizations throughout Philadelphia. On average, over 90,000 pounds of items are collected each year.

- In 2011, \$25,000 in proceeds benefited Goodwill’s local job training programs.
- In 2012, \$45,000 was raised for the United Way to distribute to charities in local neighborhoods.

Organize Hall Swaps or Mid-Year Donation Drives to Minimize Year-End Rush

Don’t wait until the hectic time of Reading Days, Finals, and move-out. Mid-year clothing or food swaps or donation drives can be more effective and ease the stress that inevitably surmounts in May. There are thrift stores in West Philly that will accept almost any donations year-round, and some organizations will pick up at your College House. Why not build a program around the benefits of unwanted item donation? “Pizza Party Clothing Swap”? “Collection Cookie Night”, anyone?

Make a Plan of Action – Early!

The most success will come from those halls that develop a plan. Involve your residents and ask them what they feel will be the most lucrative steps to curbing landfill waste at Move-Out. Don’t wait until May, and don’t set the plan yourself. Resident buy-in for participation is the key for victory.

Incentivize Donation

Moral incentives exist where a particular choice is widely regarded as the “right thing to do”. Physical incentives are a good way to motivate positive behavior, as well. Why not create an all-House contest? The floor that donates the most wins a pizza party or chosen prize!



Build PennMOVES into Events

Chances are, there will be many study breaks during the quiet Reading Days, and these events could be built around an in-House donation drive.

- Collaborate with Eco-Reps to brainstorm ways to make Finals study breaks include information and tips for donating to PennMOVES.
- Ask your House Dean to incorporate PennMOVES to the agenda of a spring RA/GA meeting, so all staff members in the House are on the same page.

Send Reminders to Donate

Even with advanced planning, reminders are necessary, as residents have a lot on their plate! Send reminders via email and Facebook, and talk about PennMOVES face-to-face individually as the time gets near. Ask your Senior Staff to put PennMOVES announcements on House newsletters or in weekly listsev emails. Make sure all residents in the House, not just your hall, know what’s happening! With increasing future College House donation amounts, less waste will consume the landfills, and more proceeds will be available for Penn to contribute to local charities.¹⁰

¹⁰ University of Pennsylvania, PennMOVES: <http://cms.business-services.upenn.edu/about-pennmoves>

10. Be A Knowledgeable Resource to Residents

Pass Along Information to Your Residents

Help your residents stay up to date! Be aware of what's happening in the daily news in the world, so you can meaningfully engage your residents in passing and during study breaks! Read the PennCurrent or Daily Pennsylvanian, watch local and international news, and be an active participant in your Penn and Philadelphia communities. Knowledge sharing is indispensable to building a well-informed and engaged College House culture around sustainability.

Encourage Everyone to Play a Strong Role in Campus Sustainability

All students, faculty, and staff play an important role in Penn's commitment to the Climate Action Plan, and you are a leader on campus as an RA/GA! Don't limit your reach to your residents – actively discuss climate issues with your House managers, faculty and visitors. Everyone can make an equal amount of difference by choosing one action over another!

Stay Involved and Knowledgeable About Penn's GCP and Campus Groups

- **Penn's Climate Action Plan (CAP):** In 2007, President Amy Gutmann signed the American College and University Presidents' Climate Commitment (ACUPCC) which committed Penn to developing plans for significant reduction of its emissions of climate-altering greenhouse gases. The CAP contains strategies, goals, and tools to track and communicate progress to the Penn community. Read the Climate Action Plan to understand the University's commitments and goals and ask yourself how you can be a stellar leader, and then communicate this knowledge to your residents in a fun and meaningful manner.
- **The Green Campus Partnership Website** contains a wealth of information and resources including podcasts and lectures, partnership opportunities, an events calendar, and engaging educational resources to share. The GCP also publishes a bi-monthly "Red and Blue on College Green" e-newsletter to keep all Penn constituents up to date with the latest sustainability news.
- **Penn's Green Campus Tour:** This new tour highlights modern US Green Building Council LEED building construction and renovations, green spaces, and sustainability enhancing features of the built environment on Penn's campus... great for educational hall outings!
- **Green Campus Partnership Twitter** – Follow the GCP news @GreenPenn for updates.
- **Green Campus Partnership Facebook** – "Like" the page and learn what's new!
<http://www.facebook.com/PennGreenCampusPartnership>
- **Email the Green Campus Partnership** For Info or Assistance – sustainability@upenn.edu

The 2011 CAP Progress Report stated that GCP'S website generates an average 100 visitors daily; and the campus wide e-newsletter has over 5,200 subscribers.

See the Appendix Section

Keep reading for more ideas and tips on how to promote sustainability education to your residents, peers, faculty, and friends in the College Houses. Together, we can all help Penn in its efforts to reduce greenhouse gases through the Climate Action Plan.



“Tell Your Residents” Appendix

You're an invaluable resource for the residents in your hall. By anticipating their questions, and by sharing knowledge on simple steps to reduce carbon footprint emissions, you're setting the example so they may lead a more sustainable lifestyle for years to come. The following outline gives suggestions on ways you can be a more valuable educator, but it is not all encompassing. If you don't know an answer, you can refer residents to www.upenn.edu/sustainability, or do the research together!

1. **Smart Purchasing** | Set a positive example in the clothes that you wear, the products you buy, the way you shop, and the brands you consume.

- a. **Clothing**

Sustainable clothing refers to fabrics derived from eco-friendly resources, such as sustainably grown cotton or linen, or recycled plastic water bottles. In 2012, an organization representing more than one-third of apparel and footwear brands created the Higg Index, a tool for measuring product sustainability, which marks a transition point for global commerce.¹¹ Refer to this Index for information when making clothing purchase decisions.

- b. **School Supplies**

The official Penn Bookstore has a multitude of options for your textbook needs. You can save 25% by purchasing used books, save 50% by renting and returning, or save 60% by purchasing e-books! When the semester is over, you can return your books and earn cash back, too!¹² Not only will you be saving money, but you'll save the environment from emissions created during production and transportation, and ultimately prevent more books from reaching landfills.

- c. **Purchase Less; Make Do With Less**

We can individually make the decisions not to consume where it's not necessary in today's world of heightened consumerism. Think outside the box: reuse old notebooks, repurpose old clothes for new fabric, and create artwork from items that would otherwise end up as trash.

- d. **Green Certification Labels**

Look for these labels when shopping and support suppliers with a sustainability program.

- Household Items: The Original Green Seal of Approval
- Agriculture and Electricity: Certified by Scientific Certification Systems
- Chlorine-Free Products: Certified by the Chlorine Free Products Association
- Energy Efficient Products: Certified by the U.S. Government ENERGY STAR Program
- Organic Produce: Certified by the USDA National Organic Program
- Wood Products: Criteria set by Forest Stewardship Council or Smartwood.¹³

2. **Dietary Choices** | Believe it or not, the choices you make in daily diet options have a large effect on the environment. By taking the steps to eat less meat and buy local foods, you're reducing the amount of carbon dioxide and pollutants that are emitted into the air, water, and land.

¹¹ Duke Center for Sustainability, Expert Available to Comment on Release of Higg Index, center.sustainability.duke.edu/news-events/2012/07/26/expert-available-comment-release-higg-index

¹² University of Pennsylvania, Bookstore,

upenn.bncollege.com/webapp/wcs/stores/servlet/BNCBHomePage?storeId=10056&catalogId=10001

¹³ US Small Business Administration: www.sba.gov/content/green-certification-and-ecolabeling

a. **Reducing Meat Consumption**

The consumption of meat accounts for 20% of global greenhouse gas emissions. According to the UN, people should have one meat-free day a week if they want to make a personal and effective sacrifice that would help tackle climate change.¹⁴

b. **Sourcing Local Ingredients**

Purchasing local ingredients supports your community's economy, reduces pollution from packaging and shipping, and encourages the consumption of fresh, rather than packaged produce. As of 2012, local Farmers Markets near Penn can be found at the following places:

- University Square (36th & Walnut) - Wednesdays
- Radian (39th & Walnut) – Fridays
- Rittenhouse (18th & Walnut) - Tuesdays, Saturdays
- Clark Park (43rd & Baltimore) – Thursdays, Saturdays
- Schuylkill River Park (25th & Spruce) – Wednesdays
- Fidler Square (23rd & Pine) – Saturdays

c. **Green Acorn Certification**

Penn's Green Acorn certification provides incentives for local businesses to incorporate sustainability into their practices, and allows students to identify the most environmentally-friendly businesses around Penn. As more businesses integrate sustainability into their operations, Philadelphia will benefit from lowered energy and water use, reduced waste, increased reuse and recycling of materials, improved air quality, and increased environmental awareness. Current Green Acorn Certified restaurants and food stores include:

- Milk & Honey (www.milkandhoneymarket.com/)
- Picnic (www.picniceats.com)
- Lovers & Madmen Coffee Lounge (www.lovessandmadmencoffee.com)
- Metropolitan Bakery (www.metropolitanbakery.com/index.php)
- Houston Market (www.vpul.upenn.edu/perelmanquad/facilities/houston_hall/houston_market/index.php)
- Mark's Cafe (www.library.upenn.edu/locations/cafe/cafe.html)
- Joe's Cafe (www.cafebonappetit.com/penn/cafes/retail/joes/)
- Un-Buttoned (www.un-buttoned.com/)
- Roost (www.phillyroost.com/)
- SweetGreen (www.sweetgreen.com/)
- The Gold Standard Cafe (<http://www.thegoldstandardcafe.com/>)
- The White Dog Cafe (<http://www.whitedog.com/>)

3. **Transportation |** A multitude of sustainable transportation choices exist around Penn's campus. Bicycling, local public transportation, car sharing, and regional transportation can be helpful to you in planning events as an RA/GA, and also for getting around while you're at Penn!

a. **Bicycling Choices**

Could you bring your residents to an event on bicycles? Since the creation of the CAP in 2009, more bicycle racks were installed conveniently throughout campus to increase the capacity to 2750 individual bike parking spots. Bike racks are now also on all Penn Buses, to encourage intermodal transportation.¹⁵ Check out these options for help with your bicycle needs.

¹⁴ UN Says Eat Less Meat to Curb Global Warming, www.guardian.co.uk/environment/2008/sep/07/food.foodanddrink

¹⁵ Climate Action Plan, Progress Report, upenn.edu/sustainability/pdf/PENN_2011_Climate_Action_Plan_Progress_Report.pdf

- GCP's Green Fund gave a 2011 grant to start the PennCycle program, a student-run bike-sharing operation, based out of the College Houses! See <http://app.penncycle.org>
- The Neighborhood Bike Works "Bike Church" at 40th and Locust offers free assistance and tools to fix bicycle mechanics for any individual with their own bike!¹⁶

b. **SEPTA**

The Southeastern Pennsylvania Transportation Authority system consists of regional rails, subways, buses, and trolleys. It is the 6th largest public transportation line in the nation, and it now boasts a carbon calculator to determine how much one can reduce their carbon footprint by leaving the car behind.¹⁷ See www.septa.org/sustain for more information.

c. **Carshare Services**

Philly Car Share and ZipCar are the two main companies in the City. These services both provide discounted memberships to Penn students and staff, and students do not need to be 25 to use these rental services! It's easy to pick up a car for a trip to the grocery store or to the shore, and Penn has new Chevy Volts at 34th & Chestnut that are available for rent through Philly Car Share. For more info, see <http://www.phillycarshare.com/wordpress/rates/university-of-pennsylvania> or <http://www.zipcar.com/penn>.

d. **Amtrak**

A great way to travel around the East coast and sightsee at the same time is by rail! As part of its environmental commitment, Amtrak is adopting comprehensive reporting standards for recording and managing greenhouse gas emissions, including those from diesel and electric locomotives, passenger rail cars, maintenance equipment, stations, offices, etc.¹⁸

e. **Megabus/Boltbus/Greyhound**

These bus lines will get you to NYC or DC within two hours, or connect you to other destinations in Canada, New England or the Midwest. These bus lines are relatively inexpensive, and use established routes, so you can avoid the extra costs and emissions of driving your own car. See: www.megabus.com / www.boltbus.com / www.greyhound.com

f. **Airplanes**

Flying is the least environmentally friendly way to travel, but sometimes it can't be avoided. Check out websites such as Terrapass,¹⁹ which explain your carbon footprint and offer suggestions on ways to offset your emissions.

4. **Energy Consumption** | Did you know that 45% of Penn's electricity comes from wind power, and we're the leader amongst higher education institutions in America? The University became the nation's largest nongovernmental purchaser of wind power when it announced that it would double its wind power purchases, and for this, we've received EPA's Green Power Partner award!²⁰ Unfortunately, 55% of our energy still comes from coal and other non-renewable resources, so we still need to take steps to curb the unnecessary consumption of extra electricity.

¹⁶ Neighborhood Bike Works, neighborhoodbikeworks.org/

¹⁷ SEPTA, Sustainability, www.septa.org/sustain/

¹⁸ Environmental Leader, Amtrak Commits to Carbon Tracking, www.environmentalleader.com/2009/07/27/amtrak-commits-to-carbon-tracking/

¹⁹ Terrapass, Carbon Footprint Calculator, www.terrapass.com/individuals-families/carbon-footprint-calculator/

²⁰ US EPA, Partner Profile, www.epa.gov/greenpower/partners/partners/universityofpennsylvania.htm

a. **Unplug and Turn Off**

Ensure all unnecessary appliances are unplugged when not in use. 10 to 15% of residential energy use is from devices that are left in the standby “vampire” mode (when the device is not in use but is still plugged into the socket).²¹

b. **CFL Bulbs**

Compared to general-service incandescent lamps giving the same amount of visible light, CFLs use one-fifth to one-third the electric power, and last eight to fifteen times longer.²² The Penn Eco-Reps and student volunteers for M.I. Green give away hundreds of CFL bulbs to College House residents each fall, while promoting the benefits of making the switch. If you'd like to exchange bulbs, most College Houses provide CFLs at their Information Centers!

c. **College House Windows**

Set a good example and help keep energy consumption down. Watch the windows in your room, in the hall lounges, and around your College House, and practice the following steps:

- Keep your windows closed when the air conditioner or heating unit is working.
- Keep the blinds drawn on summer days to block heat gain.
- Open blinds on winter days to allow natural sun to enter your room.
- Keep your vents unobstructed, so air flows freely.
- Keep room temperatures at reasonable levels.

d. **Laundry Cycle Choices**

Simply heating the water in a washing machine amounts to 90 percent of the power consumed by that machine per cycle. Use the cold water settings, and purchase a clothing rack and air dry items instead of using the dryer to further cut down on electricity consumption.

e. **Smart Power Strips**

Smart power strips monitor power consumption and can sense when computers and other devices are not being used. Upon recognition, the strip shuts off the power, thus eliminating the idle current drawn from them. These are a great investment. Encourage residents to try one.

f. **Reconsider Appliances**

It might be possible to purchase fewer appliances and still achieve the same results within your kitchen in your room or hall. At the initial floor meeting, encourage roommates and neighbors to discuss the sharing of appliances, so needless purchases are not made.

5. **Recycling Behaviors** | Penn recycles about 31% of its total waste stream and has diverted over 1500 tons of material from landfills each year since 2007. While waste may not be the largest contributor to Penn's carbon footprint, it is certainly the most visible. Provide your residents with the facts and encourage recycling of all allowable materials.

a. **What to Recycle**

College House continues to become easier and more efficient. Mixed paper, cardboard, glass, and metals have always been acceptable, and Penn now recycles all plastic including plastic containers (numbered and unnumbered), utensils, plastic bags, and plastic wrap. Additionally, Penn also now recycles aluminum foil. Remember to keep hall signage up-to-date!

²¹ Lawrence Berkeley National Laboratory, Standby Power, standby.lbl.gov/faq.html

²² Energy Star, Light Bulbs, www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw_code=LB

b. **Where to Recycle –**

Your College House should be well-equipped with bins placed strategically near all residential rooms and in common spaces. If they are not readily available, please contact Facilities.

- Make use of Penn's GCP resources that explain co-mingling, and post visibly near bins.
- Post prompts and flyers in the halls to cheerfully assist residents in finding the bins and reminding them of all materials which may be recycled on campus.

c. **Why to Recycle**

Recycling is an excellent way to save energy, avoid landfill contamination, and lessen pollutants in the environment. Did you know...?

- Recycling a soda can saves 96% of the energy used to make a can from ore and produces 95% less air pollution and 97% less water pollution.²³
- 70% less energy is needed to recycle paper compared to making it from raw materials.²⁴
- Approximate 80% glass beverage containers in California get recycled, mostly due to bottle bills that encourage recycling by offering refunds for glass bottles.²⁵

d. **Specialized Items**

Not all items can be comingled with your paper, plastic, glass, and metal materials. These specialized items must be disposed in the appropriate area, which can vary from House to House and around campus.

- CFL Light Bulbs and Batteries: These can now be placed in recycling bins in all College Houses. Ask your Information Center Specialist where the bins are (usually in the front lobby), and alert this staff member if the bins become full. They will schedule a pick-up by Penn's Environmental Health Services department.
- Ink Cartridges: Most cartridges now come with self-addressed return envelopes to send to the supplier, such as HP, Apple, Dell, etc. These can be dropped off quickly at UPS. Speak to your House Office staff to see if they have an ink cartridge recycling box, or you can request one from Office Depot to place on your floor! The Computer Connection also takes any ink cartridges for recycling.
- E-Waste: Computing equipment "e-waste" contains a lot of heavy metals and toxic materials that can seep into the water supply or poison the ground. All of these materials can be contained, and most can be reused, if they are properly disposed of. Check with your academic department to inquire about upcoming E-waste recycling events. (The Computer Connection will roll out a new E-waste recycling program in late 2012).

6. **Waste Minimization** | There are many actions you can take to reduce landfill waste!

a. **Reuse or Share**

With a little bit of planning, eliminating unnecessary waste can be quite simple!

- Eat and store food with reusable containers, plates, silverware, etc.
- Buy in bulk. Save money and packaging, and share with a neighbor or roommate!
- Drink from reusable coffee mugs or water bottles

b. **Revitalize**

²³ Massachusetts Institute of Technology, Dept. of Facilities, web.mit.edu/facilities/environmental/recyc-facts.html

²⁴ The Recycling Guide, Recycling Facts and Figures, www.recycling-guide.org.uk/facts.html

²⁵ Earth911, Recycling Facts, earth911.com/recycling/glass/facts-about-glass-recycling/

Make use of old items by repurposing or revitalizing gently used objects, such as sheets, t-shirts, picture frames, crates, or drapes. Bring in some paint, thread, glue, or scissors, and get creative! Use artistic inclinations to reduce waste, reuse, and revitalize items for a new purpose.

c. **Reusable Bags**

Along with purchasing items with minimal packaging, it is important to shop with reusable bags. Did you know...?

- Plastic bags take anywhere from 15 to 1000 years to decompose.
- Only one percent of plastic bags are recycled in the United States.
- Over 10% of washed-up debris polluting the U.S. coastline is made up of plastic bags.
- It takes 12 million oil barrels to produce 100 billion plastic bags Americans use annually.
- The petroleum used to produce 14 plastic bags can drive a car one mile.²⁶

Before heading to the grocery store, think twice, and grab a reusable bag!

d. **Reusable Water Bottles / Tap Filters**

Drink from reusable coffee mugs or water bottles, and bring them to class! There's a quick return on investment for installing an on-tap water filter, versus buying bottled water! Many options are available – from on-tap to pitcher filters which fit well in College House refrigerators!

e. **Composting in Dining Halls**

Bon Appétit dining halls at Penn now compost food waste, and estimate that approximately 400 tons of food scraps are being diverted from landfills annually.

Penn's Facilities and Real Estate Services department has also partnered with local businesses to create the Moravian Street Recycling and Composting Center where waste from campus restaurants and offices is captured and sorted for processing.

7. **Water Conservation** | Planet Earth may be known as the "water planet", but even though about 70% of its surface is covered by water, less than 1% is available for human use. We can all help protect this finite and precious resource.²⁷

a. **Shorten Showers**

Use your iPod and make a one song per-shower rule. Make it a good tune!

b. **Turn Off the Water**

When brushing your teeth, doing the dishes, combing your hair, shaving your legs... Try to start thinking more consciously when the tap is on. Every Drop Counts.

c. **Report Leaky Faucets**

It's easy to enter an AiM request via Penn's Facilities Department, and the turn-around time is usually pretty quick.

- For non-Emergencies, click "Initiate Service Request" at www.facilities.upenn.edu/serv_repair.php
- For Emergencies, call 215-898-7208, 24 hours a day!

d. **Fill Laundry Loads**

²⁶ Huffington Post, Why You Should Use a Reusable Grocery Bag, www.huffingtonpost.com/2012/04/06/reusable-grocery-bags_n_1409065.html

²⁷ US Environmental Protection Agency, Water Sense, www.epa.gov/WaterSense/about_us/index.html

While College House laundry services are “free” financially, they still have an impact on the environment. Only do laundry when you have a full load, and use cool water instead of hot to eliminate the extra power usage it takes to heat that water.

8. **Academic Opportunities** | There are many non-traditional ways in which Penn undergraduate students can be involved in learning sustainability in the classroom. In addition to the following research, internship, conference, and course suggestions, students may seek individualized outreach opportunities with faculty who are themselves involved in sustainability.

a. **Research / Intern Opportunities**

- FRES - Facilities and Real Estate Services works with the Provost's Office, students, and faculty to encourage University-wide support of sustainability efforts, which often take the form of internships or research projects.
- CURF/PUCAG - The Center for Undergraduate Research and Fellowships helps undergraduates to become involved in research by assisting with identifying resources, narrowing the topic search, and connecting students to faculty mentors and funding. Penn Undergraduate Climate Action Grants are sponsored by CURF and are provided for students studying climate change through any academic field related to sustainability.
- ISAC - The “Integrating Sustainability Across the Curriculum” program is a key component of the GCP's and Climate Action Plan's goals to encourage the whole Penn community to educate themselves on the critical issues of sustainability. ISAC connects student summer interns with faculty in many departments to help reshape the curriculum and syllabi for select courses. ISAC plans to expand annually in coming years.

b. **Courses on Sustainability**

The 2011 Climate Action Plan Progress Report stated that seven of Penn's Schools and Centers have designated their own Sustainability Coordinators, and there are always opportunities to engage in sustainability in the classroom – no matter your major.

- Toward Environmental Sustainability on Penn's Campus (ENVS 494) directly involves Penn students in creating reports to the administration on the best methods of advancing the University's sustainability goals.
- Students in any undergraduate major may elect to add the Undergraduate Minor in Sustainability and Environmental Management, which allows students to learn the nature of environmental constraints which face organizations and individuals today.
- The Program on Law, the Environment, and the Economy at Penn Law School brings scholars, regulators, and policymakers to campus to engage students and faculty on such topics as global warming and natural hazards.

c. **Penn's Academic Centers**

Many of Penn's twelve schools are building new programs around sustainability. Wharton, Engineering, and the Medical School boast academic initiatives which frequently have speakers, conferences, movie screenings, or discussions that any Penn student may attend!

- IGEL - Wharton's “Initiative for Global Environmental Leadership” is a center for educational catalyst for the adaptation of business policies and practices towards sustainability, which offers conferences, speakers, research opportunities, courses, and newsletters to keep students involved in business and brand news.
- T.C. Chan - The T.C. Chan Center for Building and Energy Studies develops new knowledge, tools, processes, techniques and continuing education for professionals involved in energy and technology.

- Penn Center for Energy Innovation - Under the combined faculty of Engineering and The College, “Pennergy” shares knowledge through energy research, education, and outreach activities that impact researchers, students, and the local community.
- Center for Excellence in Environmental Toxicology - This center in the Med School studies the links between environmental exposures and diseases of environmental etiology, focusing on the research necessary for early diagnosis and prevention. This center provides opportunities for research and education for students interested in the medical field related to environmental toxins.

For more quick info on Penn’s sustainability initiatives in academics, check out these podcasts on the GCP website: <http://www.upenn.edu/sustainability/resources/podcasts.html>

9. **GCP Extracurricular** | There are a multitude of resources and ways to get involved outside of the classroom or your College House. Learn about how you can get involved with the groups of environmentally-conscious students that help make Penn, Philadelphia, and our planet a greener place by raising awareness and engaging peers across the campus. Encourage your residents to attend a meeting with you, or find one which they find most appealing.

a. **Eco-Reps FY 12 - 75 College House & 32 Greek Eco-Reps**

Penn’s Student Eco-Rep program is designed to spread awareness of sustainability and Penn’s Climate Action Plan commitments through peer-to-peer education in the College Houses, Greek Houses, Hillel, and Athletics (new for FY 12-13). For more info, refer to page 5 of this Manual.

b. **Move-In Green**

“M.I. Green” began in 2011 as Penn’s move-in engagement program dedicated to environmental sustainability. M.I. Green gives sophomore, junior, and senior-year leaders the opportunity to educate incoming College House residents about sustainable lifestyle choices and raises awareness of the University’s Climate Action Plan. Volunteers help their peers learn about recycling on campus, switching to CFL bulbs, and other ways to reduce their carbon footprint or to get involved in sustainability initiatives at Penn.

c. **SSAP**

As the student sustainability umbrella group, the Student Sustainability Association at Penn was founded in 2010 to foster cohesion among environmentally-focused student groups, develop strategies for impacting campus sustainability, and to create a unified student voice on green issues at Penn. Encourage residents to get involved with one of these SSAP student groups!

- Earth and Environmental Studies departmental Advisory Board
- Student Eco-Reps in College Houses – Please see p. 5 in Manual
- Engineers Without Borders - Partnering with developing communities worldwide
- Green Acorn – Certifying local restaurant and businesses as “sustainable” companies
- CommuniTech – Local school technology outreach program
- PennCycle – Newly funded bike-sharing program
- PISA – Penn International Sustainability Association; increases policy awareness
- PennSolar – Network for training in solar energy design and use
- Penn Sustainability Review – Student-run print and online sustainability publication
- Penn Vegan Society – Helps ease the transition to a vegan lifestyle
- SEAS Green - Models for successful sustainability working groups in schools at Penn
- Oikos – International student organization for sustainable business and marketing
- Penn Community Against Mountaintop Removal – Pressures PNC Bank to stop MTR

- Power Up Gambia – Provides water and electricity for healthcare in Gambia
- Penn Environmental Group – Raises awareness of environmental issue on campus

10. **GCP Activities** | Join other sustainability-minded RAs, GAs, students, faculty, and staff to help make Penn a greener place by raising awareness and engaging your peers across the College House system. Check out some of the major campus-wide events sponsored by GCP.

a. Power Down Challenge

Student Eco-Reps employed creative and comprehensive marketing campaigns throughout their College Houses, and in November 2011, 12 residence halls and 7 campus buildings participated. If extended over a full year, the savings from Penn's Power Down Challenge would be over \$150,000 for the participating 17 buildings.

Important lessons to learn during the Power Down Challenge include:

- Unplugging appliances
- Using power strips to eliminate standby electrical draw
- Turning off lights in common areas
- Washing/drying clothes in full loads
- Using CFLs in desk lamps

For more information about the Power Down Challenge, see page 4 in the Manual.

b. Green Room Certification

This program is intended for use by residents of the College House system, and is a new, fun, points-based rubric designed by the GCP to measure an individual (or join roommates') efforts to reduce their environmental footprint. Topics, based off of the Climate Action Plan, will include:

- Waste Minimization and Recycling
- Energy Conservation
- Water Conservation
- Green Purchasing
- Sustainable Foods
- Alternative Transportation
- Academics
- Community Involvement

c. Green Labs

Guidelines have been set by the Perelman School of Medicine to lead the way to greener practices in the lab and research settings. Freezer maintenance is one of the topics included in the Green Labs guidelines, for which suggestions include:

- Recycling Freezers/Refrigerators
- Room Temperature Storage
- Ultra Low Freezer Cleanout Instructions
- Priority Guidelines
- Chill Up: Raise Temperature in Ultra Low Freezers

For more info on Green Labs, see: <http://www.med.upenn.edu/spo/GreenLabCert.html>

d. Green Fund

The Penn Green Fund welcomes ideas from the Penn community about ways to improve Penn's environmental performance and reduce campus emissions, designed to seed innovative ideas from Penn students, faculty, and staff with one-time grants of as much as \$50,000. The

goal is that these grants will support the CAP and reduce the University's carbon footprint and enhance its overall sustainability. Past project include:

- Penn Garden
- Transportation to Morris Arboretum
- Ozone laundry towel washing system at Pottruck Recreation Center
- Energy Efficiency Plan for University City District
- School of Medicine Lighting Analysis and Implementation
- Purchase of Electric Vehicle for Public Safety
- PEG Green Acorn Certification Program
- Annenberg worm composting
- Quad occupancy sensors for heating / cooling
- New Bolton Center sub-meters
- FY 12 - 36 Green Fund Projects Awarded \$850,000 in total grant funds

"This is a defining issue of the 21st century, and I am proud to promote higher education as a leader in addressing global climate change through research, education, and reduction of greenhouse gas emissions."

- *University of Pennsylvania President Amy Gutmann*

