



STUDENT ACTIVITY GUIDE

PROTECTING YOUR CAMPUS AND THE ENVIRONMENT WITH EPA'S ENERGY STAR® A Student's Guide to Improving Energy Performance on Campus

Introduction

Colleges and Universities—Energy Use and Its Environmental Impact

How does the energy use of your college or university impact the environment? Most of the energy generated by power plants in the United States comes from burning **fossil fuels**. **Greenhouse gases**, which contribute to climate change, are released into the atmosphere as these fossil fuels are burned. When we use less energy at school, at work, and at home, fewer fossil fuels are consumed, which means less pollution and a way to help mitigate global warming.

Did you know that:

- Commercial buildings and industrial facilities, including college and university buildings, generate about 50 percent of the nation's carbon dioxide emissions.
- Thirty percent of energy consumed in buildings is used unnecessarily or inefficiently.
- The average person in the United States emits approximately 6.6 tons (almost 15,000 pounds carbon equivalent) of greenhouse gases every year.

What Is ENERGY STAR?

ENERGY STAR is a government-backed voluntary program helping individuals, schools, businesses, colleges and universities, and other organizations protect the environment through superior **energy performance**. The ENERGY STAR program is administered



by the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE).

You may already be familiar with ENERGY STAR. The ENERGY STAR label appears on products such as lighting, computers, appliances, and electronics when they meet government specifications for superior energy performance.

The ENERGY STAR mark is recognized by more than 75 percent of the public. Americans, with the help of ENERGY STAR, prevented 43 million metric tons of greenhouse gas emissions in 2008 alone—equivalent to those from 29 million vehicles—all while saving \$19 million on their utility bills.

ENERGY STAR Is Part of the Global Warming Solution

Through ENERGY STAR, EPA helps colleges and universities improve energy performance on campuses. Many colleges and universities across the country have already successfully taken steps to improve campus energy performance and protect the environment.

Improving the energy efficiency of your campus may seem like a daunting project, but you have the power to make a positive change and have already taken the first step toward changing for the better by reading this guide. Easy, everyday actions can make a significant difference in improving campus energy efficiency. Simple steps like changing an incandescent light bulb in your desk lamp to an ENERGY STAR qualified compact fluorescent light (CFL) bulb to tracking the energy use of buildings on campus can help protect the environment for future generations.



STUDENT ACTIVITY GUIDE



How to Use This Guide.....	2
Tier 1: Raising Awareness and Harnessing Student Involvement	6
Tier 2: Taking the Next Step and Extending Your Reach	12
Tier 3: Building a Lasting Commitment To Improve	17
Communicating and Building on Your Success	24
Your Job Is Just Beginning	27
Glossary of Energy Efficiency Terms	28

How To Use This Guide

The ENERGY STAR Student Activity Guide provides a comprehensive overview of ENERGY STAR tools and resources available to colleges and universities that are looking to improve energy performance. It also offers ideas for hosting activities on campus that will appeal to and motivate students, faculty, staff, administrators, and the local community to learn how to protect the environment by using energy-efficient practices and products.

This guide is organized in three separate tiers of activity and concludes with a section on how you can communicate your successes to students, staff, the administration, and others in the community. As you progress through the guide, you might find that it offers more-involved projects. Although some of the guide’s activities might require a greater investment of time and effort, they will likely yield longer-term benefits. Each section builds upon the ideas outlined in preceding sections. While it is not necessary to engage in these activities in the order shown in this guide, it is recommended that you follow this tiered approach to get the most from your efforts.

- The **Introduction** provides an overview of the ENERGY STAR program and how to set goals for your activities on campus.
- **Tier 1** outlines activities to get individual students involved in easy, energy-saving activities.
- **Tier 2** covers activities that call for you to work with other groups on campus, yet they have the potential to create changes that are more significant.
- **Tier 3** offers ideas that will require support from the top levels of your college or university’s administration, and they will help you realize long-term goals and bring lasting improvements in campus energy efficiency.
- **Communicating and Building on Your Success** offers information on how to spread the word about your accomplishments to the surrounding community and media outlets.



STUDENT ACTIVITY GUIDE



Tools and Resources from EPA's ENERGY STAR

Below are brief summaries of the EPA tools and resources you can use to pursue energy efficiency on campus.

- **Change the World, Start with ENERGY STAR Campaign.** A year-round campaign that encourages everyone to ENERGY STAR qualified lighting, as well as adopt energy saving practices around the home and purchase ENERGY STAR qualified products. [More information on page 7.](#)
- **ENERGY STAR @ home.** An interactive, Web-based tool that provides advice and ideas for improving the energy efficiency of your on-campus residence, apartment, or home. [More information on page 8.](#)
- **ENERGY STAR Consumer Electronics Podcasts.** Podcasts that look at the growth of consumer electronics—residence halls are full of these products—and how ENERGY STAR qualified products help save money and protect the environment by using energy more efficiently. [More information on page 9.](#)
- **ENERGY STAR Showcase Dorm Rooms.** Residence hall projects that demonstrate how college students use ENERGY STAR qualified products to improve energy efficiency. [More information on page 13.](#)
- **PC Power Management.** Computer energy use in college classrooms and computer labs can be managed through software that powers down computers and monitors. [More information on page 18.](#)
- **ENERGY STAR Challenge for Buildings.** Building a Better Future 10 Percent at a Time. A national call-to-action to improve the energy efficiency of America's commercial and industrial buildings by 10 percent or more, e.g., the entire campus.
- **Portfolio Manager.** An online tool that enables facility managers to measure and track the energy use of individual buildings or an entire campus of buildings over time and see the savings associated with improved energy management. [More information on page 21.](#)

- **Energy Performance Rating.** Through use of Portfolio Manager, facility managers can also rate the energy performance of operating residence halls (dormitories), campus administrative buildings, and hospitals on a scale of 1 to 100, compared with similar, operating buildings nationwide. Portfolio Manager can also provide a central view of all campus facilities and a calculated combined energy usage based on combined floor space. [More information on page 21.](#)
- **Cash Flow Opportunity Calculator.** A downloadable tool, based on Microsoft® Excel™, that helps financial officers determine the cost of delaying energy efficiency upgrades and the payback periods for investments. [More information on page 23.](#)
- **Target Finder.** An easy-to-use, online performance rating that helps architects (and architecture students) set superior energy use targets for new construction projects on- or off-campus and then receive a rating for the design's energy intent when project plans are near completion. The output page documents energy savings, cost savings, and greenhouse gas emissions savings. [More information on page 20.](#)

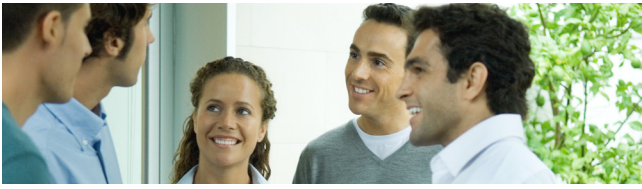
Before You Begin

Before you start organizing activities to motivate individuals (Tier 1) or groups (Tiers 2 and 3) to be more energy efficient, the following four principles are helpful to keep in mind.

Understand the Problem

- Even though colleges and universities across the country share many common elements, each campus has its own set of factors that contribute to how it uses and wastes energy. It is important to understand how energy is used on your campus if you want to improve its energy performance. For example:
- If your campus is small to medium in size, and most students live in residence halls near or on campus, you may want to focus on residence hall energy use first.





STUDENT ACTIVITY GUIDE

- If your campus is highly commuter-oriented, then changing the behavior of students living in residence halls may not be the first thing to do. Choose another activity.
- If your campus is growing at a fast rate, and many new buildings such as residence halls and office buildings are in the planning stages, looking at ENERGY STAR resources for new construction may yield the most substantial results.
- If your campus has a number of computer labs, you may want to look into PC Power Management first.

The more you know about how your campus currently uses energy, the more you can do to improve its energy efficiency. Do informal or formal surveys of students, faculty, and administrators to learn as much as you can about the profile of energy use on your campus.

Find Out What Is Already Happening

Take a moment to learn about what is already being done on your campus to address energy use. Seek out the experienced facility manager on your campus as a source of information; you may be surprised by how much the facilities team is already doing, and they may be willing to assist in your activities. Gathering this information will help you identify the most viable opportunities for improvement.

Many colleges and universities around the country have joined ENERGY STAR, and some of their efforts are highlighted throughout this guide. Visit www.energystar.gov/partners to see if your college or university is an ENERGY STAR partner.

Colleges and universities can also partner with one or more of EPA's Clean Energy programs, and a number have been recognized for pioneering clean energy projects and setting an example of how colleges and universities can be part of the solution. It is important to be efficient so that you have resources to invest in clean, renewable energy sources such as wind and solar energy. Once you are using renewable energy, you still need to know that it is being used efficiently. For example:

- New York University and Western Washington University now procure 100 percent of their total electricity through wind power.
- The University of California, Santa Cruz, generates and procures 100 percent of its total electricity through a combination of biomass, biogas, and wind power.

Where to go For More Information: Visit www.epa.gov/cleanenergy to find out more about EPA's Clean Energy programs.

Communicate Effectively

Communicating your message effectively can be the catalyst for change. It is important to craft your message so that it has a significant impact on as much of the campus as possible. ENERGY STAR has tools and resources to help with your messaging at www.energystar.gov/challenge.

Successful communication incorporates the following key components:

- **Craft Your Message to Different Audiences:** Diverse groups on your campus can play a part in changing behavior and improving energy efficiency. When planning your activities and events, craft your message to each specific audience. In other words, the way you communicate with fellow students should be different from the way you communicate with the campus administration. Tailor your message to each group's interests and concerns to maximize reach and effectiveness.
- **Be Aware of the Barriers to Participation and Different Motivations for Change:** Each audience has different obstacles preventing it from using energy more efficiently, and each audience is motivated by different factors to change behavior. There are many benefits from improved energy efficiency, but not every audience is concerned about every possible benefit. It may make sense to stress the environmental benefits with one group and the financial benefits with another.



STUDENT ACTIVITY GUIDE



- **Remain Consistent and Accurate:** To facilitate lasting change on your campus, be consistent in your messaging even as you tailor it to different audiences. A single exposure to a well-conceived message will not change ingrained behaviors. Repetition, repetition, and more repetition are crucial to swaying opinions and making your point.

Raise Funds and Combine Resources

Even with the best-laid plans, the necessary resources and funds to carry out activities are not always available. While all of the ENERGY STAR tools and resources outlined in this guide are available for your use at no cost, implementing institutional change (Tiers 2 and 3) often requires an investment of both time and money. While planning your activities and talking to your audiences, keep the following in mind:

- **Combine Resources:** Remember that you and your group are not the only ones who want to make a difference on campus. Joining forces with other groups interested in the environment, social justice, and good management practices, can help you achieve common goals, allowing everyone to maximize available resources.

- **Energy Efficiency Pays for Itself:** While some energy efficiency improvements require up-front investments, the money saved throughout the life of a particular ENERGY STAR qualified product or an energy-efficient building usually pays for itself over time. Many people fixate on the up-front costs, overlooking the fact that the money saved can be used to implement the improvements.
- **Wasted Energy Is Wasted Money:** It is important to remind everyone that wasted energy is wasted money, being paid to the utility instead of being invested in energy efficiency. Individuals and institutions have a choice. Either they go on wasting energy, paying higher utility bills, and contributing to global warming, or they invest in improvements that reduce energy use and provide paybacks down the road.

EPA offers an online Challenge Toolkit as a resource full of ideas for communicating your achievements to staff and the surrounding community.

More information on page 26.





STUDENT ACTIVITY GUIDE

Tier 1: Raising Awareness and Harnessing Student Involvement

What can you do as a student to improve energy efficiency on your campus? This section of the guide offers strategies and activities to successfully raise the awareness of fellow students about the environmental and economic benefits of energy efficiency. To help, you can take advantage of the many tools and resources provided through ENERGY STAR. The following activities are designed to require minimal commitment from your college or university's staff or administrators, allowing you to independently mobilize resources and achieve quick yet significant results.

Coordinate Your Efforts

Before taking action, you need to decide who should be involved in the planning and decision-making process. It is important to include a variety of people with diverse backgrounds, while also striking a balance that allows work to progress. Assign tasks that fit individual strengths.

Once you have a working group, agree on who the targets will be for your campaigns and activities. The target audience will determine both the types of activities you plan and your messaging.

Your Primary Audience: Students

The student population is the largest single group of energy users on your campus, as well as the easiest to mobilize. Students are motivated to have a positive impact on the world around them. Educating and empowering students about the environmental effects of energy use, particularly greenhouse gas emissions and the money wasted through inefficiency, can turn them into advocates of energy efficiency. Encourage students to take responsibility for reducing their carbon footprint and acting collectively to make a difference.

The annual influx of new students with diverse ideas and experiences renews the campus and can give life to your group's activities. Encourage students to become involved by presenting compelling arguments about the environmental and financial impacts of energy use.

It is important to gauge student sentiment regarding energy efficiency before deciding on a particular messaging strategy. Stressing the environmental importance of energy efficiency may resonate well with some students, while emphasizing the cost savings may make energy efficiency more appealing to others. For example, students living on campus may be more motivated to save energy by environmental messages, rather than financial messages, as they do not directly pay utility costs.

Your Secondary Audience: Local Retailers

The student population is a significant local consumer group. Voicing your concerns to local retailers will help them become aware of the demand for energy efficiency and ENERGY STAR qualified products. If you would like a local retailer to sell ENERGY STAR qualified compact fluorescent light bulbs (CFLs) or other qualified products, then ask them to do so. They may respond to student needs because student demand can influence their bottom line.

Take the ENERGY STAR Challenge

Through the ENERGY STAR Challenge, EPA is calling on organizations across the country—including colleges and universities—to improve the efficiency of their buildings by 10 percent or more. If the energy efficiency of U.S. buildings improved by 10 percent, Americans would save about \$20 billion and reduce greenhouse gases equal to the emissions from about 30 million vehicles.

Student groups can also sign up to promote the ENERGY STAR Challenge on campus. To let EPA know about your commitment to improving the energy efficiency of your campus, visit www.energystar.gov/challenge and take the ENERGY STAR Challenge. A representative from



STUDENT ACTIVITY GUIDE



EPA will contact your group to provide information on how you can realize your goals and change your campus for the better. You will also be able to use the ENERGY STAR linkage mark on your outreach materials. [More information on Page 10.](#)

ENERGY STAR National Campaigns and Qualified Products

Your student group can leverage ENERGY STAR in many ways to promote energy efficiency as one practical way to prevent greenhouse gas emissions. Whether you want to encourage students to look for the ENERGY STAR when purchasing products, provide them with simple tips to save energy, or participate in one of the national ENERGY STAR campaigns, EPA provides many free tools and resources to support your efforts. The samples detailed in this section are ideas for projects that can be tailored to fit your campus environment.

Change the World, Start with ENERGY STAR

The Change the World, Start with ENERGY STAR campaign builds on the success of the ENERGY STAR Change a Light, Change the World campaign, which inspired more than a million Americans to make simple changes in their home, starting with changing an incandescent light bulb to an ENERGY STAR qualified CFL. Now EPA is asking Americans to join the fight against global warming by pledging to try new actions at home and work, such as purchasing other ENERGY STAR qualified products and enabling ENERGY STAR computer and monitor sleep modes, and then sharing their stories to inspire others.

The central focus of the campaign is the online [ENERGY STAR pledge](#), available at www.energystar.gov/changetheworld where individuals can make a commitment to take simple, energy-saving actions at home, school, or work in order to save energy and help fight global warming. The campaign demonstrates the collective impact of individuals taking action: To date, more than 1.7 million

individuals have pledged, representing over 2.7 billion lbs. of greenhouse gas emissions avoided and more than \$200 million saved on energy bills.

Energy Efficiency in Action California State University, Chico

The California State University, Chico, Green Campus Program (GCP) became involved in the ENERGY STAR Change a Light, Change the World campaign, the foundation for the Change the World, Start with ENERGY STAR campaign, in October 2006. The GCP has started a CFL giveaway program where students receive a CFL for making the pledge.

At the This Way to Sustainability II Conference in November 2006, GCP teamed up with another student group, the Environmental Affairs Council (EAC), and was able to obtain a donation of 1,000 CFLs from Pacific Gas & Electric. This donation allowed GCP and EAC to give away one CFL to every person who took the pledge. Since the conference, GCP has conducted the exchange at GCP information tables on campus, during the residence hall energy reduction challenge, and during Campus Sustainability Day.



*Students at California State University, Chico, helped their peers to Change a Light and Change the World by holding CFL exchanges.
Photo Courtesy of California State University, Chico*





STUDENT ACTIVITY GUIDE

Student groups around the country found a number of ways to engage students and staff in the campaign, including:

- Bulb exchanges
- CFL sales or fundraisers
- Residence hall competitions
- Collecting pledges at sporting events, environmental documentary screenings, and other community events



Your student group can become more involved in the Change the World, Start with ENERGY STAR campaign by becoming a pledge driver. **Pledge drivers** are organizations that commit to inspire individuals to take the ENERGY STAR pledge. As a pledge driver, your group will receive tools to track the amount of greenhouse gas emissions saved by people taking the pledge.

Where to Go for More Information: To become a pledge driver or for more information on the Change the World, Start with ENERGY STAR campaign, visit www.energystar.gov/changetheworld.

ENERGY STAR @ home

ENERGY STAR @ home is an interactive, online tool that is updated seasonally with tips and advice to help you save energy where you live, reduce utility bills, and protect the environment.



Take a tour of ENERGY STAR @ home and learn how to save energy, save money, and help protect our environment.

Energy Efficiency in Action University of North Carolina, Chapel Hill

In 2006, students at the University of North Carolina (UNC), Chapel Hill, distributed CFLs to faculty, students, and staff who took the pledge at the university's Campus Sustainability Day. Currently, students are helping the university to locate where T-12 and incandescent lamps remain in campus buildings, as both are being phased out in favor of T-8s and CFLs.

At the request of students, UNC formed a sustainability-themed housing group where students participate in programs on energy and sustainability, and conduct research with the UNC Institute for the Environment. Students in the university's sustainability theme house also use ENERGY STAR qualified appliances.

Here are some sample tips for improving energy efficiency in your residence hall room or apartment:

- Replace the five most frequently used light fixtures or bulbs in them with ones that have earned the ENERGY STAR. Americans would save close to \$8 billion annually in energy costs and prevent the greenhouse gases equivalent to the emissions of nearly 10 million vehicles.
- Unplug any battery chargers or power adapters, or use a power strip as a central "turn off" when you are not using equipment. Your cell phone charger, MP3 player charger, laptop power adapter, and other appliances consume electricity when they are plugged in but turned off. This is called "standby" or "vampire" power, and it is a waste of resources.



STUDENT ACTIVITY GUIDE



- During cold weather, take advantage of the sun's warmth by keeping shades or drapes open during daylight hours. Close window shades and drapes in hot weather to keep out the heat of the summer sun.
- If you need a room air conditioner, look for an ENERGY STAR qualified model that uses at least 10 percent less energy than a standard unit.
- Look for the ENERGY STAR when purchasing a new refrigerator, computer, monitor, or television. Think twice before adding an additional refrigerator to your room or off-campus apartment.

Use ENERGY STAR @ home as a resource for simple energy-saving tips to include in your organization's brochures, flyers, or fact sheets. This valuable information will help students use less energy where they live.

Where to Go for More Information: Visit www.energystar.gov/home to try the ENERGY STAR @ home interactive tool.

ENERGY STAR Qualified Products

More than 2 billion ENERGY STAR qualified products have been sold in the United States. Look for the ENERGY STAR when purchasing these and other products for a residence hall room or off-campus apartment:

- Battery chargers
- Room air conditioners and air cleaners
- DVD players
- TVs
- Computers, laptops, and monitors
- External power adapters
- CFLs
- Residential light fixtures

Where to Go for More Information: For a full list of the more than 50 ENERGY STAR qualified product categories, visit www.energystar.gov/products. To learn about how you can feature ENERGY STAR qualified products in a residence hall setting or apartment, *see page 13*.

ENERGY STAR Consumer Electronics Podcasts

Consumer electronics make up a significant part of the energy used in the average college residence hall. With constantly changing technology, it is a challenge to keep up with the latest in consumer technology while keeping energy efficiency in mind. Encourage your fellow students to learn about using electronics more efficiently by tapping into the ENERGY STAR Consumer Electronics Podcasts.

Where to Go for More Information: Download ENERGY STAR Podcasts at www.energystar.gov/index.cfm?c=products.pr_podcasts or on the Apple® iTunes music store, keyword "ENERGY STAR."

Spread the Word

After you have planned a project, activity, or event (by taking advantage of ENERGY STAR tools and resources), the next step is to think about publicizing your activities. You can increase the reach of your message and strengthen your campaign by creating clear, easy-to-understand outreach materials that communicate the environmental and financial benefits of saving energy. There are a number of customizable outreach materials, such as fact sheets, posters, news release templates, and e-mail templates, available at www.energystar.gov/challenge.

Where to Go for More Information: The list of ENERGY STAR campaigns and corresponding outreach materials can be found at www.energystar.gov/index.cfm?c=promotions.pt_national_promotions.





STUDENT ACTIVITY GUIDE

Build upon the Power of ENERGY STAR

Your group can use ENERGY STAR Linkage Phrase Marks along with your group's name and logo (if you have one) to take advantage of the high awareness of ENERGY STAR. Using the nationally recognized mark is a powerful tool to strengthen your group's energy efficiency messaging.

Use the ENERGY STAR Linkage Phrase Marks on materials designed to convey the benefits of ENERGY STAR. It may be used on any promotional materials such as:

- Promotional materials (such as T-shirts, hats, light switch stickers, mouse pads) or advertisements in a general location that is not product specific;
- Point of Purchase materials;
- Web sites;
- Stationery such as letterhead, business cards, etc.

Guidelines for Using the ENERGY STAR Linkage Phrase Marks

Horizontal and Vertical Versions:

EPA has created two versions of the Linkage Phrase Mark, each including the ENERGY STAR symbol block and an attached messaging block. The messaging block devotes significant space to a call-to-action, which is important to building a stronger emotional appeal for the symbol.



Clear Space: EPA requires that a clear space of .333 (1/3) the height of the graphic box within the mark should surround the mark at all times. No other graphic elements, such as text and images can appear in this area.

Minimum Size: The mark may be resized, but the proportions must be maintained. For legibility in print, EPA recommends that the symbol block within the mark not be reproduced smaller in width than .375 inch (3/8") for print.

Lettering legibility inside the mark must be maintained on the Web.

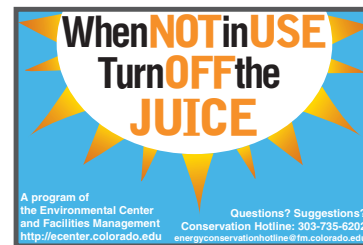
Preferred Color: The preferred color for the Linkage Phrase Mark is ENERGY STAR Blue (100% Cyan). Alternate versions in black or reversed out to white are allowed. The Web color equivalent of ENERGY STAR Blue is hex color #0099FF.

Where to Go for More Information: For complete guidelines for using the ENERGY STAR linkage phrase mark, visit www.energystar.gov/linkage.

Make the Campaign Your Own

Developing your own campus-specific energy efficiency materials strengthens your message by localizing the issues and customizing the information to your campus and surrounding community. Work with a student taking graphic design courses to help make your materials stand out and grab attention. Some items you can create and distribute include:

- Light switch stickers with your group's logo or team mascot that encourage people to turn off the lights when they leave the room.
- Re-usable coffee or water bottle cozies with energy efficiency messages.
- Mouse pads with energy efficiency messages to place in campus computer labs and libraries.



The University of Colorado at Boulder created these light switch stickers to remind students and staff to turn off the lights and help save energy. Photo Courtesy of the University of Colorado at Boulder



STUDENT ACTIVITY GUIDE



Place materials in strategic areas that get a high volume of student traffic so that your group generates the most attention and action for your efforts. The campus bookstore is also a good place to reach students. For example:

- If the campus bookstore sells consumer electronics along with books and supplies, ask if you can include a flier with energy efficiency tips as a take-away.
- Ask the management to advertise that it sells ENERGY STAR qualified products and display them prominently in the store to raise awareness.

Work with Others to Raise Funds and Accomplish Goals

Even though ENERGY STAR tools and resources are available at no cost, a little fundraising is often required to prepare materials, get the word out, and raise awareness of energy efficiency on campus. There are many avenues through which your student group can raise the funds needed for energy efficiency projects, such as existing campus fundraising events, alumni funding, and university or non-profit grants. You can approach local and regional offices of environmental groups for assistance, too.

Working with local retailers can be a great kick-off for raising funds or finding sponsors. Students are their customers. For example:

- Co-branding with local retailers presents another opportunity to engage the community.
- Existing events provide opportunities to raise funds and strengthen your campaign without unnecessary effort. By coordinating with other events, you can spread the word about energy efficiency to an audience that may not be aware of the issue. Proceeds from these events can be used to purchase energy-efficient products or other materials needed to carry out your activities. Ideas for incorporating ENERGY STAR into existing campus events include:

- Organizing campus sporting events and runs or walks to educate the student population about energy efficiency. Recruiting event sponsors and charging a small participation fee will help defray event costs and allow your group to start investing in energy efficiency.
- Organizing or participating in the campus “green” fair. At the fair, your group can host a bake sale, sell t-shirts, or charge businesses to participate in the fair to utilize the event as a fundraiser.
- Hold an auction of items from local businesses that are “green.” Solicit donations from an assortment of local businesses, and be sure to show them your appreciation.

Working with the extended university community as discussed in Tier 2 will improve your chances for success. University alumni or other groups may donate funds or other resources to specific efficiency projects if you bring the issue to their attention and highlight your progress.





STUDENT ACTIVITY GUIDE

Tier 2: Taking the Next Step and Extending Your Reach

Now that you have successfully implemented a student outreach campaign as discussed in the previous section (Tier 1), you are ready to take the next step. This section of the guide will outline whom to include so that you achieve broader support of energy efficiency as well as examples of projects you can implement at your college or university.

Now you can begin to target university faculty and staff to bring about more comprehensive change. Much like when you concentrated on mobilizing the student body, your efforts will have a greater effect if you focus on specific audiences.

Identify Your Audiences—Beyond the Students

To persuade your college or university to implement broader changes, you do not need a commitment from the entire university. By engaging a number of smaller groups on campus, you can have more of an impact on energy use on campus. Potentially receptive audiences include:

- University resident life or housing officials who can participate in residence hall energy efficiency competitions
- Department staff or professors who can incorporate energy efficiency into college coursework
- Utilities or local businesses that might provide sponsorship or publicity opportunities
- Facilities management and sustainability departments that may help coordinate efforts on campus
- Student government or alumni groups that can promote your group's efforts through other channels
- Local residents who are receptive to the financial and environmental benefits of energy efficiency and will help improve community awareness of the issues

Communicate Effectively but Specifically—Modify Your Message To Fit Your Audience

When trying to create institutional change, the message needs to be different from when you focused on individual behavior change. The benefits of improved energy efficiency vary. Before you approach the audiences listed previously, determine how energy use on campus affects them and how it might do so differently from individual students.

As you modify your message to fit these new audiences, remember to stay consistent with the facts. While it is important to adapt your message to achieve different goals, maintaining consistency helps avoid confusion. For example, do not switch between megawatts and **kilowatt-hours** when talking about energy units since there are a number of energy efficiency terms that may not be common knowledge. Keep the core message easy-to-understand and terminology consistent.

Enlist Others To Help the Cause

As stated earlier, you and your group are not the only people on campus who want to make a difference in the environment. Talk with other student groups to see if you share common goals and can use ENERGY STAR to realize those goals. You may be able to work effectively with those groups to extend your reach and broaden the appeal of your message.

Your group should consider a Web site, newsletter, or e-newsletter, all of which are excellent forums to raise awareness. Once you have posted information about energy efficiency and ENERGY STAR on your own Web sites and publications, work with other groups to publicize your activities through their channels. Possibilities include:

- If your college or university has a section of its Web site devoted to sustainability or environmental issues, try to secure space on the site to promote your activities.



STUDENT ACTIVITY GUIDE



- If your university is particularly large, it may be more realistic to have your information posted on a departmental Web site, such as Residence Life or Environmental Sciences.
- Include information on your activities and events on the Web sites and in publications of groups that share common goals.
- Co-brand outreach materials and press releases with your logo (if you have one), other groups' logos, and the ENERGY STAR linkage mark to add more power to your activities.

ENERGY STAR Showcase Dorm Rooms— Energy Efficiency and Everyday College Life

A creative way of encouraging residents in student housing to use ENERGY STAR qualified products is to create an ENERGY STAR Showcase Dorm Room. Its first audience is students, but it also captures the attention of anyone interested in college life. Once it is set up, you have an easy educational tool for an entire academic year, unlike an event, which is a one-time education and publicity opportunity. The room itself saves a moderate amount of electricity, but the project's emphasis is the ripple effect of how much your college or university could save if every residence hall room on campus used ENERGY STAR qualified products and practiced energy-efficient habits.

The first four steps below describe how to showcase an energy-efficient room. Steps 5 through 7 show how to use the room as a tool to create change on campus.

Step 1: Gain Administrative Support

Obtain approval from your Residence Life Program before you begin, and be sensitive to security concerns raised by inviting outsiders into residence halls.

Step 2. Find the Students and the Room

Begin with a core group of active, committed students, and solicit interest through the campus paper or stage a lottery. You can decide to use the room that the selected students have secured for the upcoming year or you can pre-select a room or apartment for the students to reside in.

Energy Efficiency in Action University of New Hampshire

To address the quickly growing energy consumption in University of New Hampshire (UNH) dormitories, the student senate passed a resolution that strongly recommends students bring ENERGY STAR qualified appliances to campus for use in their dorm rooms. UNH already has the same policy for official purchases and will require all official purchases to be ENERGY STAR qualified by the 2011–2012 academic year. UNH partnered with Best Buy to encourage students to participate in the program. The local Best Buy has agreed to offer a 10 percent discount to any member of the UNH community purchasing an ENERGY STAR qualified appliance.

To showcase these efforts, a dorm room including ENERGY STAR qualified computers, television, and refrigerator donated by Best Buy will be used to conduct tours for prospective students. The UNH Energy Office will meter the energy consumption in the showcase dorm room and compare this usage information to that of non-equipped rooms. The showcase dorm room, as well as others in the Green Living unit, will also be exhibited on the UNH Web site. Over 400 postcards will be distributed to new students at orientation to encourage participation in this program.





STUDENT ACTIVITY GUIDE

Step 3. Identify Which Products and Energy Efficiency Messages to Showcase

To figure out which products carry the ENERGY STAR, [see page 9](#). On the ENERGY STAR Web site—www.energystar.gov— you can find which manufacturers make ENERGY STAR qualified products and which models qualify. Key ENERGY STAR qualified products for effective dorm room showcases include:

- Office equipment: computers, monitors, printers
- Lighting: desk lamps, CFLs, torchieres, ceiling fixtures
- Battery chargers for MP3 players, cell phones, etc.
- Consumer electronics: televisions, DVD players, stereos
- Appliances: refrigerators, compact refrigerators, dishwashers, clothes washers
- Heating and cooling: ceiling fans, room air conditioners

You can also create signs or posters with energy efficiency messages to help students change their energy use behaviors. Key energy efficiency messages include:

- Turn off lights when not in use.
- Put your computer to sleep or in standby mode when not in use.
- Use a ceiling fan to keep cool in the summer.
- Keep windows closed when running air conditioning or heat.
- Plug all electronic devices into a power strip and turn them off when not in use.

Step 4. Find Sponsors

You can find a list of partner manufacturers and retailers at www.energystar.gov that you can contact to see if they are interested in highlighting their products in exchange for publicity. Remember to talk to the managers of the campus bookstore to see if they would be interested in showcasing products that have earned the ENERGY STAR.

Appealing to your local utility company's sense of social responsibility may encourage it to sponsor activities such as a showcase dorm room. Many utilities want to be seen as good stewards of the environment. Some utilities offer rebates that students can use for purchasing energy-efficient products (or making energy efficiency improvements at home if they are commuters). Utility companies also often have **demand-side management** concerns. Energy efficiency is one method of alleviating this concern. That argument may persuade local utilities to participate in your energy efficiency efforts if your appeal to social responsibility does not win them over.

Step 5. Create a Buzz on Campus

Start with a grand opening of the ENERGY STAR Showcase Dorm Room. Invite officials and reporters from your campus and local papers. Take pictures and post them on your group's and your college or university's Web sites. To keep the buzz alive, invite faculty and key administrators, give them a tour, ask for suggestions on educating people, and urge them to incorporate ENERGY STAR into institutional purchasing decisions. Follow up on their suggestions. Also consider showing the room to prospective students.

Step 6. Turn It into a Competition

Talk to a representative of your campus's residence life program about holding an energy efficiency competition among the residence halls on campus as a way of stimulating direct student involvement. Many university housing officials or facility managers are able to track energy use in the residence halls. Provide a prize for students living in the residence hall that improves energy efficiency the most during a set timeframe.

One of the keys to encouraging continuous improvement and behavioral change is finding ways for all students to see the results of the work and be proud of the success. Your group and staff in the Residence Life Program should



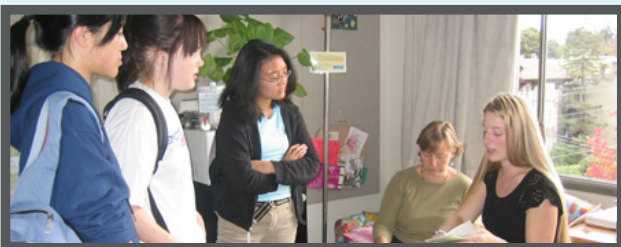


Energy Efficiency in Action Showcase Dorm Rooms in California

To ensure that campus residents purchase the most efficient appliances on the market, students and staff at three California universities created ENERGY STAR Showcase Dorm Rooms in the residence halls. The rooms—located at the University of California (UC) Berkeley, University of California (UC) Irvine, and California State University (CSU) San Bernardino—differ in their particulars, but each is a showcase of energy efficiency in a residence hall setting.

All three rooms feature ENERGY STAR qualified lighting, appliances, and electronics commonly found in student rooms. Regular tours are available or planned for each of the rooms, which also feature signs explaining the benefits of ENERGY STAR qualified products. The CSU San Bernardino room is shown to prospective college students as part of the university's orientation tour.

The UC Irvine and CSU San Bernardino projects developed as a direct result of the Alliance to Save Energy's Green Campus Program. Made possible by the ratepayers of California under the auspices of Southern California Edison and the UC/CSU/Investor Owned Utilities Energy Efficiency Partnership, the Green Campus Program is an educational effort on 12 CSU and UC campuses that seeks energy savings through student-staff collaboration.



*Students at the University of California Berkeley take a tour of an ENERGY STAR Showcase Dorm Room.
Photo courtesy of The Alliance to Save Energy*

find ways to make the results of the competition visible to everyone on campus and in the community so that students can take credit for and own their success. Post results of the competition in residence hall lobbies, the student union, and other high-traffic areas, as well as via local media outlets. This is an excellent way to send a message to university administrators that students care about energy efficiency, and it provides an incentive (sometimes a public relations incentive) for administrators to implement additional improvements on campus.

Step 7. Move to Whole Building Performance

After you have gone through and made improvements to the rooms in the residence hall and successfully demonstrated energy efficiency in college residence halls, consider expanding the scope of your project to include the whole building. Talk to your campus facilities manager and administrative officials to find out whether the building is individually metered (also called sub-metered). If it is, you can use [EPA's energy performance rating system](#) to rate the energy use of the residence hall and possibly earn the prestigious ENERGY STAR.

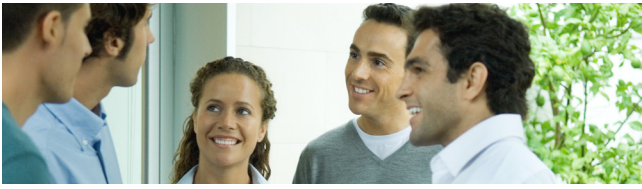
For more information on [sub-metering](#) and Portfolio Manager, [see page 21](#).

Bring Energy Efficiency into the Classroom

Part of creating lasting behavioral change is finding ways to bring energy efficiency and environmental issues into the classroom and integrate them into students' overall learning experience.

Your college or university can improve energy efficiency by providing avenues for students to understand how energy efficiency impacts society. Many areas of study have a sustainability track in which environmental issues are covered, some of which include:

- Agriculture
- Architecture



STUDENT ACTIVITY GUIDE

- Business and Marketing
- Communication
- Construction
- Economics
- Environmental Studies
- Government/Public Policy
- Natural Sciences
- Public Health
- Service Learning Courses and Independent Studies
- Sociology
- Sustainable Development
- Sustainable or Traditional Engineering
- Urban Planning

Talk with professors and teaching assistants who may be open to incorporating new learning opportunities and finding ways to integrate energy efficiency, sustainability, and environmental issues into their coursework. For example, architecture students can use EPA's Target Finder to set energy performance targets for their building designs. As the project nears completion, they can input the intended energy use, and Target Finder generates a rating (from 1 to 100) based on a national database of similar, operating buildings. Engineering students can measure and track energy use of campus buildings using EPA's Portfolio Manager. Sociology students can learn about energy resource scarcity and how it impacts society. You do not have to begin by developing a new class or entire track on energy efficiency. Small opportunities for extra credit or independent learning are a good start.

Energy Efficiency in Action Georgia Tech University

Georgia Tech's College of Architecture offers a rich curriculum in architectural technology, encompassing courses in environmental systems, sustainability, and green construction.

The energy-related courses in the professional degree program in the College of Architecture introduce ENERGY STAR and the United States Green Building Council's Leadership in Energy and Environmental Design® (LEED) Green Building Rating System™ as two widely accepted measures of energy and environmental performance.

One course where energy efficiency is emphasized is called "Performance Aspects of Building Systems," in which students perform an on-campus audit using a toolkit, including EPA's Portfolio Manager tool for operating buildings or Target Finder for design projects, both based on EPA's energy performance rating system.

Teams of two students select a building and perform several audits of energy use, lighting, comfort, and maintenance. These results are compared during class.





Tier 3: Building a Lasting Commitment To Improve

While reading this guide, you've learned about the many ways to raise the overall awareness of energy performance on campus, mobilize the student body, and change the behaviors of different groups associated with your college or university.

By starting those activities, you have laid the foundation for creating a commitment to improving energy efficiency campus-wide. Now, you can approach officials in the university administration and encourage them to make lasting, comprehensive changes to the university's energy management policies.

Identify Your Audiences— Engaging Campus Administration

Aim to influence more than just the student population when engaging in the activities described in this section, as you now must focus your efforts on high-level campus administration.

- **The President or Chancellor** can have a major influence on decisions about investing in improved energy use. It is important to make sure that he or she supports the activities described in this section because top-level support is necessary in legitimizing your efforts.
- **Facility and Energy Managers** will be your main audience when trying to change the way that campus buildings track energy use and install improvements.
- **Procurement and Financial Officers** will make many of the funding decisions for any comprehensive energy efficiency improvements. You will need to make sure that you impress upon this group that energy efficiency is a sound financial decision and that money is saved through efficiencies on campus.
- **Information Technology Staff** will be involved in implementing power management technology for the computers in campus libraries, offices, and computer labs.

You may still be talking to students, student government, alumni, and many of the other campus groups already mentioned in this guide, but your primary focus at this level should be the decision makers on campus that can help create significant changes that will last beyond your tenure as a student.

Communicate Effectively but Specifically— Capitalize on Opportunities To Make Your Case

When talking to these decision makers, focus on making your points concisely and effectively. You may not get more than one opportunity to state your case. Be prepared. Your audiences have many responsibilities, and your group will not be the only one vying for their attention. Even if they are genuinely concerned about energy efficiency on campus, administrators may not have much time to listen to your concerns. Here are a few ways to make your limited opportunities successful:

- **Emphasize the Success of Other Energy Efficiency Activities**— Stress that energy efficiency is important to the students on your campus and inform the decision makers of your previous successes or those at other campuses as you build your case for broader improvements on campus.
- **Prepare Talking Points**—Make sure that you know what you are going to talk about before you engage your audience. Decide which benefits of energy efficiency will resonate the most with your audience and explain them concisely.
- **Use ENERGY STAR Templates and Drop-In Language**— EPA offers different templates and examples of drop-in language for your presentation or handouts. These allow your arguments to address what is most important for each audience. Download these templates at www.energystar.gov/challenge.



STUDENT ACTIVITY GUIDE

Urge Your College or University To Become an ENERGY STAR Partner

One of the easiest actions your college or university can take to demonstrate its commitment to improving energy efficiency and protecting the environment is to become an ENERGY STAR partner. There is no cost to do so, and the application process is very easy. More than 150 colleges and universities have joined ENERGY STAR and are making significant strides in improving energy management. Your college or university should be encouraged to join this group of forward-thinking leaders who care about environmental stewardship.

While partners have access to all the no-cost EPA tools and resources mentioned in this guide, they also have access to special workshops, peer networking meetings, and technical advice to assist them as they plan and execute their energy management strategy. Informing decision makers and administrators about the benefits that peer institutions have captured through their work with EPA's ENERGY STAR program may motivate them to participate.

To become a partner, a high-ranking university official such as the president or chancellor signs a partnership letter and sends it to EPA. As a partner, your college or institution agrees to:

- Develop and implement a plan to reduce **energy intensity** across its facilities and operations by following the energy management strategy recommended by EPA.
- Track, set baselines for, and **benchmark** building energy performance by using tools such as EPA's Portfolio Manager tool.
- Support the ENERGY STAR Challenge to reduce energy use by 10 percent or more.
- Educate faculty, staff, students, alumni, and other interested parties (e.g., parents who pay tuition bills) about the ENERGY STAR partnership and highlight achievements through recognition opportunities offered by EPA.

For the partnership letter, visit www.energystar.gov/ia/business/partnership_letter.doc.

Implement PC Power Management

A relatively simple yet significant improvement that your university can make involves implementing ENERGY STAR Power Management on computers in campus computer labs, offices, and libraries.

Energy Efficiency in Action University of Wisconsin-Oshkosh

Like many organizations, the University of Wisconsin (UW)-Oshkosh computer labs kept their PCs powered 24 hours a day to accommodate students and perform nightly software updates. Encouraged by a State of Wisconsin directive to save energy, Academic Computing took a hard look at their computer lab and realized that they were not taking full advantage of the computer power management features that are standard in most Windows operating systems.

The UW-Oshkosh Academic Computing Department realized that a great deal of energy was being wasted. Convinced there must be a better way, UW-Oshkosh ultimately found savings through the ENERGY STAR program. As a result, their computers, which normally use around 60 to 70 watts of power, now enter a low-power mode, using around 2 to 3 watts, after 20 minutes of inactivity.

Using built-in Windows Wake on LAN (WOL) functions, a free network tool provided by EPA called EZ GPO, and about 3 hours of staff time, UW-Oshkosh was able to:

- Place 485 computers into a low-power "sleep" mode
- Continue to update lab computers nightly
- Save more than \$9,000 annually (at 5 cents/kWh)





ENERGY STAR Power Management features come standard in Windows and Macintosh operating systems and place inactive monitors and computers into a low-power sleep mode. A simple touch of the mouse or keyboard “wakes” the computer and monitor in seconds. Two types of power management options are available:

- Monitor power management can save \$10 to \$30 per monitor annually by placing inactive monitors into a low-power sleep mode.
- Computer power management places inactive computers into a low-power sleep mode, which can save \$15 to \$45 per desktop computer annually.

Where to Go For More Information: ENERGY STAR Power Management software is downloadable at no cost at www.energystar.gov/powermanagement.

Sub-Metering Your Campus

As stated in Tier 1, understanding how your campus uses energy is the first step toward improving energy efficiency. You should ask your university facility managers how the buildings on campus are metered. Many campuses have master meters that quantify the energy use for groups of buildings or for the entire campus. Sub-metering shows how much energy individual buildings on campus consume.

Although installing sub-meters may cost a few thousand dollars, there are associated savings because energy consumption can be managed more effectively when the energy-use profile of individual buildings is understood and tracked.

Some metering companies and utilities own, operate, and maintain the meters; they provide a long-term contract that incorporates the capital cost of the sub-meters into a flat, monthly fee. This may include software assistance and periodic calibration and maintenance.

Energy Efficiency in Action University of Virginia

Sub-metering is a primary tool used by the Energy and Utilities Department at the University of Virginia (UVA) to insure efficiency, improve reliability, and plan growth of utility services. Utility services (steam, heating water, chilled water, electricity, natural gas, and domestic water) are provided to nearly 500 university buildings, accounting for more than 14 million square feet. Monthly energy use is metered and tracked for each building. This allows the buildings to be properly billed for utility use but more importantly, metering allows utility usage to be tracked for each building and building type.

Benchmarking of building energy and water use per square foot is done to identify buildings that have a high use compared to other, similar buildings. Investigations are conducted on these buildings to determine the causes of high use so that corrective action can be taken. One example of successful benchmarking involved the university’s chemistry building. Its energy use increased unexpectedly, making it one of the larger energy users per square foot on campus. Because it was sub-metered and energy use was measured and tracked, the university’s facility managers were able to quickly identify the increase and then examine that building for its cause.

To make utility usage and metering data more useful to building occupants, Web pages were developed to show energy use and cost statistics per building. Engineering students at UVA provided their skills and expertise in capturing real-time data from meters and the building automation systems in developing the Web pages.





STUDENT ACTIVITY GUIDE

ENERGY STAR for New Construction

When your institution is designing new residence halls, office buildings, campus hospitals, or planning major building renovations, remind decision makers to encourage the design team to use EPA's Target Finder. This easy-to-use online tool allows architects to set a superior energy performance target (from 50 to 100) for design projects and major renovations at the beginning of the design phase. The tool shows the energy use (kBtu/sf/yr) associated with the rating, as well as the costs and emissions. A higher rating equates to lower energy use. Target Finder helps design teams establish energy targets that support the 2030 Challenge on global warming and the American Institute of Architects (AIA) fossil fuel reduction goal.



DESIGNED TO EARN THE ENERGY STAR

The estimated energy performance for this design meets US EPA criteria. The building will be eligible for ENERGY STAR after maintaining superior performance for one year.

When the project is near completion, the design team can enter the project's estimated energy consumption (design energy intent) and Target Finder will generate a rating, complete with the associated costs and emissions.

Talk to facilities managers on campus and let them know that they can estimate the energy performance of their new projects by using Target Finder. You can also involve architecture students on campus by encouraging them to use Target Finder to rate the energy performance of their projects.

Where To Go for More Information:

Visit www.energystar.gov/commercialbuildingdesign to learn more about setting energy performance targets with Target Finder.

Energy Efficiency in Action

SUNY Geneseo

Officials at the State University of New York (SUNY) Geneseo emphasized energy efficiency from the ground up for their new construction projects. As they planned the construction of Seneca Hall, a new residence hall on campus designed to house more than 80 students scheduled to open in 2009, the university's administration asked architects at Bergmann Associates to ensure that the building would be a top energy performer from the first day of operation. Architects at Bergmann used Target Finder to set an energy performance target for the design and worked with the engineering team to meet SUNY Geneseo's expectations. Near completion, the design team entered the intended energy use in Target Finder, and Seneca Hall received an 88 out of 100. The project achieved Designed to Earn the ENERGY STAR recognition. It is estimated that the residence hall will save SUNY Geneseo more than \$15,000 per year to operate due to its superior energy performance.



Architects at Bergmann Associates designed Seneca Hall with energy efficiency in mind using EPA's Target Finder. **Photo courtesy of Bergmann Associates, SUNY Geneseo, and the Dormitory Authority of the State of New York**



STUDENT ACTIVITY GUIDE



EPA's Energy Performance Rating System for Buildings

Campus buildings are, of course, major energy consumers. By understanding the energy performance of various buildings, facility managers that you may be working with can set improvement goals and prioritize investments in efficiency upgrades. EPA's Portfolio Manager helps college and university facility managers keep information about consumption and performance for individual buildings or an entire campus in one easy-to-access online system. They can track multiple energy and water meters for each facility, monitor costs, and measure the facilities relative to their past performance. They can also track the performance of the entire building portfolio over time to see the effects of their energy efficiency upgrades. For certain building types, they can even see how their buildings are performing compared to their peers.

Portfolio Manager can be used to track on-site solar and wind electricity production. Tracking and managing all of the energy used by a building—both renewable and non-renewable—gives a more comprehensive assessment of the true energy performance of a building. Facility managers can also use Portfolio Manager to track renewable energy certificate (REC) transactions. RECs represent the environmental, social, and other non-power-related qualities associated with a unit of renewable energy, and an organization can purchase RECs regardless of whether or not the buildings on your campus have onsite renewable energy.

If a building rates 75 or better in Portfolio Manager, the building earns the ENERGY STAR. The rating is based on a year's worth of actual energy use (utility bills), and the building must meet industry standards for comfort and indoor air quality. For each building that qualifies for the ENERGY STAR, EPA sends a large plaque that can be affixed to the outside of the building or placed in the lobby so your university can proudly display proof of its energy management success.

Where To Go for More Information:

For more information on measuring and tracking the energy performance of buildings on campus, visit www.energystar.gov/benchmark.

Working with facility managers on campus is crucial for successfully tracking the energy use of campus buildings. Many colleges and universities have staff devoted to campus energy management; however, students often take an active role in the process of measuring and tracking the energy use of campus buildings.

Energy Efficiency in Action University of New Hampshire

Students at the UNH took a lead role in tracking the energy use of the university's residence halls. As a result, the university became the first institution in the United States to earn the ENERGY STAR for residence halls. By taking steps to improve energy efficiency in these buildings, UNH both saves money and helps reduce greenhouse gas emissions.

UNH has incorporated many energy efficiency measures into the design and operation of buildings campus-wide. The extensive upgrades to these residence halls were part of a campus-wide Climate Education Initiative to conserve energy and lower greenhouse gas emissions. Facility management efforts include efficient lighting, revamped building control systems, and energy education for staff and the rest of the university community.

Students at UNH played an important part in helping earn the ENERGY STAR for campus residence halls. Photo Courtesy of the University of New Hampshire





STUDENT ACTIVITY GUIDE

ENERGY STAR Purchasing

Help your administration understand the advantages of purchasing ENERGY STAR qualified products and equipment and encourage them to do so. The following resources are available:

- Calculators to determine annual and life cycle cost savings
- Downloadable drop-in procurement language
- Lists of ENERGY STAR qualified products, by product type, manufacturer, model number, and features
- Product specifications
- Quantity Quotes, an online tool available at www.quantityquotes.net that facilitates bulk purchasing of ENERGY STAR qualified products

Where to Go for More Information: To learn more about the procurement of ENERGY STAR qualified products, visit www.energystar.gov/purchasing.

Financing Institutional Energy Efficiency Improvements

There are many ways for colleges and universities to fund energy efficiency improvements on campus. If your university has not built energy efficiency funds into its current operating budget, EPA can inform you and school officials about the different financing avenues to explore. Remember that if money is not spent on energy efficiency improvements, as much if not more money is often wasted because of inefficiency.

Energy Efficiency in Action University at Buffalo

The Faculty Student Association at the University at Buffalo made a simple request for ENERGY STAR qualified vending machines, and they have reaped the benefits ever since. Thanks to the influence of internal energy efficiency champions, the university requested energy-efficient vending machines for all facilities.



In response, one beverage company offered a competitive package that included replacing more than 100 campus vending machines with brand new ENERGY STAR qualified units. These improved machines reduced annual energy usage by 1,800 kWh, saving the school nearly \$150 per machine each year. On-site testing has confirmed that the university is saving more than \$20,000 each year from this simple change.

Energy Efficiency in Action University of Colorado at Boulder

In 2004, the University of Colorado Student Union (UCSU) voted to increase student fees \$2.80 to create the "Energy Efficiency Fund" (EEF) to pay for energy efficiency and renewable energy projects in the three student-owned buildings on campus: Wardenburg Health Center, the University Memorial Center, and the Recreational Center.

The annual fund was approximately \$115,000 per year plus 35 percent of the first year's projected savings. Building on the success of this fund, in 2007 the UCSU voted to create the "Energy and Climate Revolving Fund (ECRF)" in the amount of \$500,000 allocated from student reserve funds. Replacing the EEF, the ECRF provides no-interest loans for energy efficiency projects in the student-owned buildings with a maximum 5-year payback.



STUDENT ACTIVITY GUIDE



Green Fees

Many college students have organized referendums on “**green fees**” to pay for energy efficiency projects and renewable energy purchases on their campuses. If your administration sees that the students are willing to pay a small fee for efficiency, university officials may be more willing to approve additional funds from other budgets.

Revolving Loan Funds

A **revolving loan fund** provides a way to implement energy efficiency projects and repay any necessary loans with the resulting savings. The future energy savings from these projects go back into the fund to make other energy efficiency improvements possible.

State Energy Funds

There may be funds for energy efficiency projects from your state energy office. Depending on your state, funds may include grants, tax credits, loans, or rebates.

Public Benefits Funds for energy efficiency projects are available in Arizona, California, Colorado, Connecticut, Delaware, the District of Columbia, Florida, Idaho, Iowa, Illinois, Maine, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Rhode Island, Texas, Utah, Vermont, Washington, and Wisconsin.

Fund availability is subject to change, so visit the Database of State Incentives for Renewables and Efficiency at www.dsireusa.org and check with your state energy office to see which programs are currently available.

ENERGY STAR Cash Flow Opportunity Calculator

Many college and university administrations try to wait until they have capital funds to finance energy efficiency improvements rather than borrow money to begin the projects immediately. In many cases, although the cost of delaying these projects may not be immediately apparent, it is significant. EPA's Cash Flow Opportunity Calculator helps financing officials see the cost of delaying energy efficiency upgrades.

By providing decision makers a strong cost-benefit analysis, you can demonstrate more effectively to them that an efficiency upgrade makes financial sense, not just environmental sense. The ENERGY STAR Cash Flow Opportunity Calculator can help administrators answer three critical questions about energy efficiency investments:

- How much new, energy-efficient equipment can be purchased from the anticipated savings?
- Should this equipment purchase be financed now, or is it better to wait and use cash from a future budget?
- Is money being lost by waiting for a lower interest rate?

Where to Go For More Information: To download and use the Cash Flow Opportunity Calculator, visit www.energystar.gov/index.cfm?c=tools_resources.bus_energy_management_tools_resources.





STUDENT ACTIVITY GUIDE

Communicating and Building on Your Success

Completing your goals (set in Tiers 1, 2, or 3) is a significant accomplishment, but your effort should not stop there. You need to communicate your success to fellow students, professors, staff, administrators, and the surrounding community throughout the process.

Your group, your fellow students, and your college or university should be proud to be leaders in energy efficiency and in protecting the environment from global warming, so get the word out! Your early success is only the beginning. Use it as a stepping stone to bigger and better accomplishments. Sharing your successes does not have to wait until you've completed all three tiers outlined in this guide. Even though communication activities are listed at the end of this guide, you should always tell people about your success.

Identify Your Audiences

As your group achieves its goals, inform the appropriate internal or external audiences of your success. Depending on the size and scope of your organization's campaign, you may also want to reach out to university alumni, parents, the local community, state and local government officials, and neighboring universities.

Communicating Within Your College or University

Awareness is an important tool in achieving even greater energy efficiency. Educate your fellow students about the impact that improved efficiency has made on both the campus and the environment. Active, aware students can stimulate decision makers to act.

- A coalition of organizations working on the same issue(s) is a very effective organizing tool. Make sure that other

student groups are aware of your accomplishments and seek their help in doing more in the future.

- The university's student government association is a direct link between the student body and the administration. Attend the next meeting, present your accomplishments to student representatives, and explain your future plans to them. Work with individual members of the student government to promote your next campaign, secure funding, and increase awareness as well as results.
- Make prospective and incoming students aware of your work in energy efficiency and climate protection. They are benefiting from your group's work and may continue the work after you have graduated.
- Make the university's achievements as high profile as possible. Use every means available to trumpet your success, such as newspapers, radio, TV, Web sites, blogs, and more. Students and staff will be motivated to make further improvements if they know that their actions are making a difference and being recognized. Whenever you are able to obtain data that supports your success, make sure that people can see and learn from it.

Communicating to the Community

- If your organization has helped create an ENERGY STAR Showcase Dorm Room, hosted a Change the World, Start with ENERGY STAR event, or achieved significant energy savings, contact local media outlets such as newspapers and television stations. Do not hesitate to move beyond the university and bring your message to the surrounding community.
- When reaching out to those outside of the university community, don't forget to contact local and state government officials. Many public agencies are already partnering with ENERGY STAR and making energy efficiency improvements. Tell them about the progress that you have made at the university, invite them to your events, and encourage them to support energy efficiency.



STUDENT ACTIVITY GUIDE



Identify Targeted Media Outlets

Take advantage of the various opportunities to communicate your success and your energy efficiency message, both on and off campus. Media coverage can increase participation in your campaign, strengthen support, and raise general awareness. Make sure the media sources you use target your audience. Stay persistent when pitching story ideas and working with reporters.

When communicating with the media, give recognition to all parties who have aided your group in its activities. Be generous with thanks to administrators, staff, faculty, and students who have helped your organization achieve its energy efficiency goals. Maintaining good relations with all parties will ensure future collaboration and even more success. Below are suggestions on how to use the media effectively:

Communicating Within Your College or University

- Start with the school newspaper and television and radio stations. They are accessible and already target your peers. Invite student reporters to your events and work to get coverage of your energy efficiency activities.
- Word-of-mouth might be the most effective form of communication on a college campus. Use social networking sites like MySpace or Facebook to communicate your message. Encourage members of your organization to bring friends to meetings and discuss energy efficiency and climate change with classmates.
- Put posters up in the student union and on public bulletin boards in academic buildings, hand out flyers, and make sure that your organization has a presence at university events such as concerts, festivals, and Homecoming.
- Reach out to the parents of current students and university alumni. Contact the appropriate people in your institution and work to have your campaign featured in the university's magazine, alumni newsletter, or admissions materials.

Communicating to the Community

- Make contacts with local media outlets. While it may be more difficult to get coverage from newspapers, magazines, television, and radio stations outside the college or university, doing so will boost your campaign and bring recognition to your group, your university, and the link between energy efficiency and the environment.
- Identify media outlets or reporters that cover higher education or environmental issues. Don't waste time pitching reporters who are not interested in the type of work you are doing.
- Make sure that your messaging is easy to understand and converts into a newsworthy story. Stay persistent and consistent in your message to reporters.
- Craft your message to suit the media outlet. If the reporter seems more concerned about environmental issues, stress the reduction of greenhouse gas emissions associated with energy efficiency. If they are more concerned about the financial benefits to the community, then stress how much money has been saved by the university as a result of your activities.
- Contact members of the local community such as business leaders, religious leaders, environmentalists, and activists. Invite them to your events and find ways to get them involved in your campaigns. These individuals can bring experience and advice to your organization and also carry your message to the community.

Use Resources Wisely

- Find public relations and marketing students who can help you communicate effectively. Suggest using your campaign as a class project or a way to gain experience in media and outreach. Have students develop press releases, sample articles, or other communications materials.
- Use the ENERGY STAR Web site to educate yourself and others about energy efficiency and climate change. Also look for sample press releases, Podcasts, and other media-related information.





STUDENT ACTIVITY GUIDE

ENERGY STAR Resources for Effective Communications

When communicating your campaign goals and successes, it is important to prepare well and stay on-message. Always craft talking points in advance of an interview or when giving a presentation, and anticipate the kinds of questions you may be asked. Have the answers ready. Draft a press release and pitch letter that will help the media convey your message.

ENERGY STAR has materials available to assist you:

- ENERGY STAR Challenge Toolkit
- Sample press releases for:
 - Announcing your university's partnership with ENERGY STAR and your participation in the ENERGY STAR Challenge
 - Announcing receipt of the ENERGY STAR label or other award
 - Announcing your activities and campaigns
- ENERGY STAR Public Service Announcements (PSAs) for print, radio, and television
- Quick lists and fact sheets that can help you develop your message
- Customizable posters
- Additional tips for holding successful media events

Where to Go For More Information: To create effective communications materials that highlight your university's accomplishments, visit www.energystar.gov/challenge.

Energy Efficiency in Action University of Michigan

Home to more than 40,000 students, the University of Michigan encompasses over 500 buildings and more than 20 million square feet of floor space. An ENERGY STAR partner since 1997, the University of Michigan has progressed consistently in its implementation of a comprehensive energy management plan and has communicated its successes to students, staff, and the community.

As a result of these efforts, the university was named ENERGY STAR Partner of the Year in 2004, and the administration and students are continually improving the energy efficiency of their university. The university's organizational commitment to energy efficiency was reinforced at the top levels in 2003 when President Dr. Mary Sue Coleman highlighted the university's ENERGY STAR efforts in her annual presentation to the state legislature. Individual buildings are metered and tracked to understand their energy use and monitor energy savings. The university invested \$7.7 million in lighting improvements and \$8.3 million in mechanical system projects. As a result, savings from the energy management plan are conservatively projected at \$6.5 million annually. This equates to the full annual tuition for approximately 900 undergraduates, or an increase of 1.5 percent in the university's research mission.



STUDENT ACTIVITY GUIDE



Your Job Is Just Beginning

Keep up the great work! You've learned about the environmental and financial benefits of improved energy efficiency. Through your efforts, students on campus are becoming more aware of their energy use and are making a difference by purchasing ENERGY STAR qualified products and adopting energy-efficient practices. Your group is helping to establish a long-term, campus-wide commitment to reduce energy use and prevent greenhouse gas emissions that will protect the environment for future generations.

After you've accomplished these goals, don't stop. Strengthen your college or university's commitment by continuously working to improve campus energy efficiency. This guide has outlined how the ENERGY STAR program can help in your efforts, but there is always more to do to keep the momentum going.

Renew your activities each year. Recruit incoming students to join in your efforts. Check the ENERGY STAR Web site often for new ideas on how to reinforce what you've done so far so that energy efficiency becomes a natural part of everyone's life on campus.

Resources for Learning More

ENERGY STAR Web Site
www.energystar.gov

ENERGY STAR for Higher Education
www.energystar.gov/highered

Energy Action
www.energyaction.net

Energy Action is a coalition of more than 30 organizations from across the United States and Canada, founded and led by youth to help support and strengthen the student and youth clean-energy movement in North America.

National Wildlife Federation's Campus Ecology Program
www.nwf.org/campusecology

The National Wildlife Federation's Campus Ecology program helps colleges and universities confront global warming by supporting and recognizing climate and wildlife-friendly practices and cultivating long-term leaders on campus and in the community.

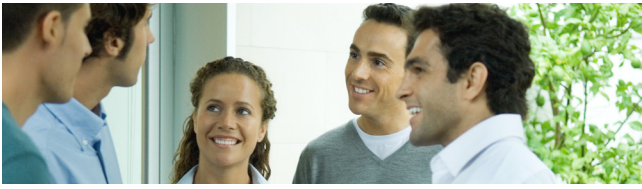
The Association for the Advancement of Sustainability in Higher Education
www.aashe.org

The Association for the Advancement of Sustainability in Higher Education aims to advance the efforts of the entire campus sustainability community by uniting diverse initiatives and connecting practitioners to resources and professional development opportunities.

Have Questions, an Idea, or an Experience to Share?

If you have any questions about ENERGY STAR or if you have an idea or an experience about how your university has improved energy efficiency, please send an e-mail to: studentactivityguide@cadmusgroup.com.





STUDENT ACTIVITY GUIDE

Glossary of Energy Efficiency Terms

Benchmark: A process of measuring the energy performance of buildings on an on-going basis, which allows facility managers to track improvements over time and identify priority areas for energy efficiency projects.

Demand-Side Management: A process used by utility companies to manage electricity generation and transmission capacity so that they can meet fluctuations in electricity demand.

Energy Efficiency or Energy Performance: A term referring to the practice of minimizing the energy necessary to perform a specific task and reducing wasted energy, thereby reducing the amount of greenhouse gases released into the atmosphere by power plants.

Energy Intensity: The rate at which energy is used compared to another factor, such as money, square footage, or time. EPA's Portfolio Manager measures energy use intensity of a building in kilo-British thermal units per square foot.

ENERGY STAR Pledge: An online commitment by individuals to use ENERGY STAR qualified lighting, as well as adopt energy saving practices around the home and purchase ENERGY STAR qualified products.

EPA's Energy Performance Rating System: A system that allows facility managers to measure and track their energy use over time and assess how efficiently their buildings use energy. This system uses a 1 to 100 scale to measure a building's performance. Residence halls, office buildings, hospitals, and other space types that earn a 75 or better on this rating system are eligible to apply for the ENERGY STAR.

Fossil Fuels: A term given to a collection of finite energy sources which are the primary sources of energy used to fuel human activity. Fossil fuels come in a variety of forms, such as coal, oil, and natural gas.

Green Fee: A small increase in student fees used to pay for energy efficiency projects or other environmental improvements on campus.

Greenhouse Gases: The name commonly given to a group of chemical compounds that contribute to climate change. Burning fossil fuels at the nation's power plants releases these compounds into the atmosphere. Greenhouse gases include: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Kilowatt Hours (kWh): A unit of measure for energy use. Other units of measure include kilowatts (kW), British Thermal Units (BTU), kilo-Calories (kCal), and therms (thm).

Pledge Driver: An organization that sets a goal to inspire individuals to take the ENERGY STAR Pledge. As a pledge driver, groups gain access to tools and materials to track and promote the difference they are making to help protect the environment for future generations.

Revolving Loan Fund: A pool of funds that reinvests money as loans are repaid. In the case of energy efficiency improvements, money saved through initial efficiency improvements are re-invested for future projects. This provides a source of funding for energy efficiency improvements without incurring capital costs.

Sub-Metering: The process of installing individual meters to track building energy use. This allows facility managers to obtain data on specific facilities and identify which buildings need energy efficiency improvements.





Acknowledgements

The U.S. Environmental Protection Agency would like to thank the following institutions and organizations for contributing content for the ENERGY STAR Student Activity Guide.

- California State University, Chico
- California State University, San Bernardino
- Georgia Tech University
- Oberlin College
- The Alliance to Save Energy
- The State University of New York, Geneseo
- University at Buffalo
- University of California, Berkeley
- University of California, Irvine
- University of Colorado at Boulder
- University of Michigan
- University of North Carolina, Chapel Hill
- University of Virginia
- University of Wisconsin – Oshkosh

