Organizing Residence Hall Conservation Competitions
A Guide for Students

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http://energyactioncoalition.org/

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Introduction

Since as early as 1990, colleges and universities have been holding competitions to encourage energy and water conservation and waste reduction in college residences. These competitions reward on-campus residents for the greatest reduction in energy use, water use, and/or waste generation. They go by different names—"Do it in the Dark," "Green Games," "Eco-Olympics,"—and the rules vary from school to school. But the competitions all have one trait in common: they are great at motivating students to conserve resources.

In this guide, we have compiled many of the best practices from these competitions that you can use to create or improve a competition at your own campus. We hope you will find this guide to be comprehensive and user-friendly, whether you are just getting started or have already organized a competition.

Of course, there are many more great ideas out there and tons that have yet to be imagined. Some ideas that work on one campus might not work on another because of differences in climate, infrastructure, or campus culture. In the end, you know your school better than anyone else, and you will be able to tell what will work best on your campus. Just remember: have fun!

More Online!

- How-to Videos
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- Sample Materials

Dorm vs Dorm Sustainability Competitions Website

This site was created through a collaboration of Duke's Environmental Alliance and AASHE.

The Benefits of Campus Conservation Competitions

Campus energy, water, and waste reduction competitions are primarily thought of as ways to motivate students living on campus to conserve resources. Yet, in addition to encouraging sustainable behavior, school administrations and student groups can also realize other benefits.

Saves the school money

Utility bills often represent a substantial portion of a school's operating budget, and increasing tuition is often the response to rising energy prices or greater resource use. A successful conservation competition can be a cost-effective alternative for campuses and students to save money.

While the exact amount of monetary savings depends on factors ranging from utility rates to the duration of the competition or the types of resources monitored, many campuses have realized significant savings from conservation competitions. For example, Rice University estimated cost reductions from all energy sources (electricity, chilled water, and steam generation) between $15,000-20,000 from their Dorm Energy Competition, which lasted one month.

Other competitions at schools such as Furman University and Macalester College have achieved savings between $5,000-15,000. Even competitions at small schools or among small segments of campus lead to big savings. For example, California State University, Chico's energy conservation competition, with approximately 1,000 students competing, saved about $2,000 in electricity costs over just one week. As these and other competitions demonstrate, a competition of almost any size can generate remarkable cost savings.

Demonstrates sustainability leadership

And let us not forget the main reason for trying to reduce electricity use and waste. Energy conservation and waste reduction competitions help to reduce the overall amount of greenhouse gas emissions that enter into the atmosphere and ultimately cause climate change. As colleges and universities reduce energy consumption and waste on campus, they are setting examples for other schools, communities, and, most importantly, their students. Conservation and waste reduction competitions can teach students how to reduce energy use in their own homes and workplaces later in life.

Additionally, colleges and universities are increasingly making formal commitments to cut greenhouse gas emissions and are developing plans to meet reduction targets. A competition to conserve energy can be converted into greenhouse gas emission reductions and used to help the school achieve its goals. As more and more institutions begin to realize their GHG reduction goals, other colleges and universities will see that it is possible to do, and hopefully, will begin their own initiatives to do the same.

Strengthens student groups

Organizing a conservation competition can be a very positive experience for students in many different ways. First, competitions provide a productive outlet for students to make a measurable difference on campus. Seeing the results of the competition can be very rewarding and inspiring. Additionally, organizing a competition provides a variety of learning experiences and leadership opportunities such as coordinating volunteers, running meetings and working with staff and administrators to complete a project. The organization and creativity that go into the competition also provide positive benefits for the groups involved. For example, student groups can develop relationships with other organizations and departments that will provide a foundation for greater collaboration in the future. Furthermore, giving students the chance to contribute to the betterment of their campus or residence hall provides them with confidence and a sense of community-belonging. Students at Furman University started the Kill-a-Watt Challenge during the school's Year of the Environment. Similarly, Rice University started their Dorm Energy Competition during the school's year-long focus on Humans, Nature, and Climate Change in 2007.

At schools where administrators are reluctant to invest in energy efficiency projects, students can use their competitions to show that they are taking action and saving money for the school. When students can claim responsibility for saving the school money, they can use their success to leverage the school to commit to similar projects or sustainability initiatives.

Campuses are laboratories

Often, communities, elected officials, and government agencies learn from activities taking place on college and university campuses. Conservation is an important subject nation-wide as cities and municipalities around the nation are looking for ways to encourage others to conserve water and energy. Often, saving money motivates folks to conserve water and energy, but many people are reluctant to do so either because they do not know how or because they think it will diminish their quality of life. Student groups and universities can show communities across the nation that not only is using less water and energy fun and easy, but it saves money and helps protect the environment.

From Dorm vs. Dorm to Campus vs. Campus

Coordinating a conservation competition on your campus is a great way to prepare for or to improve performance in an inter-campus conservation competition such as Recycle Mania or the National Campus Energy Competition.

Recycle Mania began in 2001 with a goal of increasing recycling and reducing waste on campuses. This competition pits campuses against each other in a friendly, 10-week competition to see which school can recycle the most. The competition is divided into particular peer groups and prize categories. For example, in the Per Capita Classic competition, schools compete to see which school can collect the most recyclables per-capita. In the Waste Minimization competition, schools compete to see who can produce the least amount of solid waste per-capita. Supported by the Environmental Protection Agency's Waste Wise program, the National Recycling Coalition, and the Coca-Cola Company, Recycle Mania increased from 2 to 400 participating campuses between 2001 and 2008. More information on RecycleMania can be found at www.recyclemaniacs.org.

The National Campus Energy Competition, created in 2008, is a month-long energy conservation competition between high schools, colleges, and universities across the US. During February 2008, schools competed to achieve the highest reduction in heating-energy and electricity use. Schools similar in size or within a particular region were encouraged to establish their own prizes and awards. This student-organized competition demonstrates how student leadership can have an impact well beyond one's own campus. More information about NCEC is available at http://climatechallenge.org/ncec.

The sooner you start planning, the sooner your campus will be prepared to take on other schools. Who knows—conservation competitions might become the next big school sport!

Getting Started

Monitoring Resource Use

To get started, you will need to find out how resource use is monitored on your campus. This information will help determine what kind of competition is best for your campus because you must be able to monitor and measure resource use in order to compare progress and hold a competition. More specifically, you must be able to monitor resource use by campus section—that is total campus resource use must be broken down by some subset of on-campus residences (by dorm room, residence hall, apartment, etc.) so that you can tell where changes in resource use are occurring.

Some schools monitor energy and water use digitally from a central location; others have analog meters on all of the buildings, much like what is commonly found outside residential homes. Increasingly, schools are sub-metering buildings and installing real-time metering technology to monitor energy consumption. Sub-metering allows resource use to be monitored on specific levels—by floor or even by individual room! Although this technology is more expensive, it makes monitoring resource use much easier and helps provide valuable feedback to competition participants.

Unless you already know how resource use is monitored on your campus, the only way to find out is to ask. Facilities Management (sometimes refered to as the Physical Plant or Maintenance Department) is a good place to start. Most schools have someone in this department who monitors energy and/or water use as part of his or her job. The housing department is another good place to start. If they are not monitoring resource use, they should at least be able to tell you who to contact.

When you are asking about this information, be open about why you want to know. Some schools consider this data sensitive information, so they might not want to share it with you if they do not know why you want to know. Additionally, both facilities and housing officers are often happy to support conservation competitions and can be valuable partners for your effort.

Data for water use should be reported in gallons or liters while waste is usually measured by volume or weight. Weight is generally a better overall measure, but such data isn't always available. As an alternative it may be possible to obtain an estimate of waste volume, perhaps based on the volume of dumpsters on campus and the frequency of pick up. If necessary, volume figures can easily be converted to approximate weights (*see Appendix C*).

Energy is a little more complicated because there are different forms of energy. Schools either purchase or generate their own electricity, which is reported in s kilowatt hours (kWh). Many campuses also use fuel oil, natural gas, biomass, or

other resources to produce energy for heating and cooling. This energy is reported in British Thermal Units (BTU).

Almost all schools will have some form of electricity metering system on the buildings. Some institutions have one central location where all of the meters are located, while others have a meter on each building, which will require someone to go to each building and read the meter. If buildings are sub-metered by floor, dorm room, or apartment, you have some greater flexibility in how you structure your competition. If you determine that they are necessary for the competition, it is possible to get them installed, but they can be costly and generally require professional installation. If the facilities department will not or cannot pay for the sub-metering devices, your organization does not have the funds to pay for them, you could try contacting other departments, organizations, and offices inside and outside of the institution. Another group might agree to donate a portion or all of the necessary funds in exchange for a few advertisements.

Once you determine how resource use is monitored on your campus, the next step is to decide whether you want the competition to focus on energy, water, waste, or some combination. You'll need to have at least some resource use data in order to hold a competition. Beyond that, what you choose to focus on will depend on what issues are most relevant or are most likely to generate excitement on your campus. For example, focusing on water consumption may be the most relevant in an area facing a drought.

If you choose to focus on energy, you will have to decide whether you want to include all forms of energy or just a single form in your competition. In general, it is easier to focus exclusively on electricity. However, since heating and cooling is usually responsible for a substantial portion of a school's total energy use, you may want to incorporate energy for heating and cooling into the competition as well.

Assembling a baseline

The next step is to assemble a baseline for the resource use on your campus. The baseline is the standard against which you measure changes in resource use during the competition. In most cases a baseline is simply an average of energy/water use or waste production for each of the competitive units (i.e. dorm room, apartment, or residence hall) over a given period of time. You will want to use a per-capita average baseline for each competitive unit to enable fair comparisons. Ideally, a baseline is derived from the average resource use over the past 3 or more years. If you hold a competition during February 2009, the baseline would be the average per capita resource use during February 2006, February 2007, and February 2008.

If such data are not available, use what you have to create a baseline that enables the fairest comparisons possible. Many schools simply compare a

competitive unit's resource use during the competition to the previous week or month. Alternatively, others compare resource use during the competition to resource use over same time period in the previous year. In any case, it is important that the baseline be broken down along each of the same competitive units that are participating in the competition.

Making Contacts

There are a number of staff members and campus leaders that can be helpful to you as you carry out your competition. There are some folks, like whoever monitors resource use on your campus, who are absolutely necessary for the competition to be a success. Other contacts are not critical, but can help make your job easier. In any case, you do not want to alienate a potential partner or ally. You just might want to ask them to help with funding or some other aspect of the competition.

Often, partnerships between student groups and university departments can be mutually beneficial. University departments will always have greater access to resources than student groups, so a department can help a student group improve the competition. Additionally, having a department sponsor the competition helps legitimize the project and demonstrates to students that the competition has the school's support.

Furthermore, staff are usually tied up with the responsibilities of their job and may not have time to complete exciting projects like a conservation competition, even if it is something they have wanted to do for a long time. The housing office, for example, may be eager to encourage students to conserve resources but might not have the flexibility to organize a competition. By partnering with students, faculty and staff can achieve what they might not be able to otherwise.

The larger and more diverse your team is, the more likely you will be to succeed. Some important contacts include:

- *Resource Monitor*: Contacting whoever monitors electricity/water use on your campus is extremely important. S/he will be absolutely indispensable as you are running the competition because s/he will have access to all the data.
- *Housing Office*: Be sure to at least touch base with the housing department to make sure this competition will not conflict with any projects or campaigns that they are working on. In addition, they might be able to help you out with funding and other aspects of the competition. Many housing offices can send emails out to all campus residents, which can also help you spread the word.
- *Office of Sustainability*: Not all schools have a specific department for sustainability initiatives, but colleges and universities are increasingly creating departments to coordinate these initiatives on campus.

- *Resident Assistants* (RA): RAs have a lot of face time with campus residents. Engage RAs early in the planning process. They can be helpful in coordinating advertising and reaching out to residents. During the competition, RAs can help to get students excited and keep them motivated to win.
- *Student Leaders*: Student leaders on campus can be important allies. Whether they are Student Government officers, leaders in other student organizations, or just the popular kids, they can help to motivate other students to get involved. They might even be willing to co-sponsor the competition.

Below are some tips for effectively establishing and maintaining partnerships with important staff members, departments, and campus leaders.

- *Face to Face*: Staff get e-mails and phone calls from face-less campus community members every day. If they do not have a face to put with your organization, it can be easy for your group's communication to be just as abstract. Schedule a face-to-face meeting with any staff whose help you need; it will help your organization stand out. Even a short five-minute meeting makes a big difference. And when you meet, make sure you show some curiosity about their work and appreciation for what they do. Also be considerate of their workload and how much time they have to give you.

- *Do Not Make Assumptions*: Making the assumption that a department will help you again just because they did last year or on another project can be a big mistake. Sometimes their priorities will have changed or staff will have turned over, meaning that you have to build a relationship from scratch. Even when the staff is the same as last year, they might not remember how the competition works and what is so great about it. For busy staff, last year was a long time ago. Be prepared to remind them how and why they contributed in the past.

- *Clear Communication*: Ask your partners how they want to stay in touch. For example, they might prefer emails or phone calls. Be sure to get a business card, and ask them if they will give you their cell phone number in case something urgent comes up. Find out how you can help them help you. What information do they need to complete the tasks you have asked them to?

- *Clear Expectations*: Make sure everyone is aware of what is expected of them. End each meeting with a recap of what decisions were made and what everyone agreed to do.

- *Designate a Point Person*: Busy staff members probably do not have time to meet and get to know everyone in your organization. Designate a

single person to be the organization's point person for each contact or department. It is okay if something comes up and occasionally the staff person or department has to interact with someone else from the organization, but it will be confusing if several different students are contacting them about the same project.

- *Be Prepared*: Your partners might not be able to invest much time and effort into the competition. They will be more likely to get involved if they see that you are organized. Have all of the competition details (or ideas, if you are still in the planning stage) together, and be able to explain the concept clearly. Being organized and prepared for meetings will convey to those you meet that you are serious and mean business. It will also encourage your partners to adhere to the same high standards for organization and preparedness.

Funding

It does not take a fortune to organize a hugely successful competition. You will probably want as much funding as you can get in order to offer snazzy prizes, hold a kick-off party and add other exciting elements to the competition, but there are ways to create incentives and publicize the competition on a small budget. In any case, you will at least want to know how much money you have up front so you can plan the rest of the competition.

As with any project, there are several ways to raise money, and creativity expands your opportunities endlessly. Here are a few fundraising ideas:

- *Apply for funding from your Student Government Association (SGA)*: Your SGA might have funds for special projects. At Macalester College, students received $1500 from their SGA to purchase 1,000 energy efficient compact fluorescent light bulbs. Contact your SGA to see if you can apply for special funding for your conservation competition.
- *Find other campus organizations/departments to co-sponsor the competition*: Greek organizations, university departments, and other student groups might be interested in helping out, even if it is just helping to advertise the competition. For example, the Residence Life Council at Furman University provided $3,000 for a kickoff party and prize for the winner of the Kill-a-Watt Challenge. Students at Davidson College partnered with a sorority to host a kickoff party for their energy competition.
- *Look for grants from local organizations or state/federal agencies*: Opportunities for partnering with local organizations or government agencies vary from place to place, but students at California State University, Chico received some funding from the Alliance to Save Energy's California Green Campus Program.

- *Seek product/service donations*: Rather than trying to raise money to pay for a product or service that you need, try to get those items donated. The organizers of Northwestern University's Green Cup worked with their food service provider to sponsor a kickoff dinner with a sustainable menu. Local vendors also donated pizza and ice cream for the Green Cup winners.

Competition Structure

The competition structure is a crucial part of organizing this event. Participants will need to know when the competition begins and ends; which sections of campus can participate; how resource use will be reported; and, most importantly, how the winner is determined. It is important that everyone is on the same page and that all expectations and guidelines are established upfront. This information should be posted where students can find it—perhaps on a website, in the dorms, or in the school paper.

Which sections of campus housing will participate in the competition?

By now, you have probably determined how resource use is monitored on campus and whether your competition is going to focus on energy, water, waste or some combination of these. The ability to monitor resource use will be the greatest limiting factor when determining which sections of campus to include. Ideally, even if all areas of campus housing would participate, it might makes sense to limit the competition to a particular subsection. Perhaps resource use is only monitored in certain residence buildings. Or maybe your campus has a large population, and you do not have the resources to coordinate a campus-wide competition.

For example, when students at Brandies University started their "Do It in the Dark" competition, they discovered that the school only has energy meters for two quads of freshman dorms. They decided to have the North and South quads compete against each other. Similarly, only part of Furman University's campus housing has reliable energy monitors. The reliable section, called "North Village," consists of 11 apartment buildings with energy meters for each building. All of the buildings compete against each other in Furman's "Kill-a-Watt Challenge."

When will the competition take place?

The length of the competition is another critical aspect of the competition structure. The duration needs to be long enough for students to have a chance to make serious reductions in resource use, but not so long that students become disinterested or you have to struggle to keep students engaged. Usually, a week or two ends up being too short while an entire year is too long. For these reasons, you might want to consider having a month- or semester-long

competition. You can even repeat a month-long competition later in the same year.

The time of year is just as important as the competition duration. A semester-long competition will obviously fall over a few holidays when students are off-campus, but try not to schedule shorter competitions over long or extended holidays.

Determining the Winner

The most important information to most student participants will be how to win. It is important to establish these rules upfront so no one is disappointed or feels cheated. While this is a competition, it is supposed to be fun and everyone should have a fair and equal chance at winning. With different sections of campus housing involved, it can be a little bit tricky to make the competition fair, but it is not impossible.

Setting up rules for how the winner is determined is where your baseline comes in. It can be challenging to make the competition fair because some buildings might be newer, more efficient, or have fewer residents. The most equitable way to account for the differences you cannot control is to use the individual baseline for each competitive unit (i.e. dorm room, apartment, residence hall) and compare a unit's progress against its own baseline. Then calculate the percentage change for each competitive unit and reward the unit with the highest percentage change. Since each hall, dorm, apartment, or building is competing against its own historical record, differences in building age, construction, orientation, and occupancy, will be eliminated. For example:

Data	**Building 1**	**Building 2**	**Building 3**
Baseline	X_1		
Current Use	X_2		
% Change	$[1 - (X_2 - X_1)] \times 100$		

Prizes

Although it is not necessary, offering a prize for the winner is a good way to encourage participation in the competition. Several schools have had tremendous success simply offering recognition or "bragging rights" to the winners, but a tangible award is an effective incentive to stimulate participation.

Often students will ask if they will receive the monetary savings from their conservation efforts. Students at Davidson College learned that giving the

savings to the winning dorm is problematic as the students have to agree about how to spend the money or divide it among themselves. The best option is to encourage the school to reinvest the savings in energy efficiency and water conservation projects. If the conservation efforts are successful, students will realize the savings by not experiencing drastic tuition increases.

Popular prizes are tangible and appeal to a variety of students. However, it is important to consider the participants and their preferences. If the competition is for freshman dorms, a pizza party might suffice. Older students, especially those about to graduate, will prefer something more substantial. Students organizing the Furman University "Kill-a-Watt Challenge" set aside $2,000 and offered a $20 cash prize to all the students in the winning building.

Another idea might be to talk with your facilities management department to see if they would be willing to donate a percentage of the savings that appear as a result of the competition. This would provide you with more funding to provide prizes and motivate students to continue to save energy even if they are in the lead. Ohio University made an agreement with their facilities management department that 8% of the savings realized from the competition would be donated to the department to use for prizes. OU was able to send 210 students to Cedar Point, a nearby amusement park.

It might not be possible to offer a prize to all of the residents in the winning building. One way to overcome this dilemma is to enter all of the residents of the winning building into a raffle to win a prize. If you take this route, try to offer a prize like a gift certificate or cash award of $50-100.

Publicity

Not only will you want to let students know about the competition before it starts, but you will also want to keep them engaged throughout the competition. That is why publicity is so important.

Publicity provides tremendous opportunity for creativity. The more creative you are with your publicity, the more likely students will be to remember the competition and want to get involved. For example, students at Macalester College in Minnesota advertised the competition with Energy Heroes—students dressed up in super hero costumes that went around campus letting students know about the competition.

Campus dining halls and anywhere else campus residents go is an ideal place to advertise, but do not forget the most important place—the residences themselves. Teaming up with RAs can make advertising in the residences easier. Some schools, like the University of New Hampshire, identify several captains each year to motivate students in their dorm rooms and apartments. Captains act as the competition liaison between the residents and competition

organizers. Assigning captains to each dorm or competitive unit is also a great way to engage other students and get more people involved in the competition.

Keeping students engaged can be difficult, especially if other high-profile events like Homecoming take place around the same time. Regular updates on the competition rankings, new tips for energy/water conservation and other fun facts or statistics are essential to keep students engaged. Regular updates about the competition rankings and resource use also show students that their efforts have tangible results. Students at California State University, Chico installed flat-screen real-time energy monitors in dorm lobbies, giving students instant feedback about the competition. These monitors displayed changes in energy use as they occurred and compared each dorm's results. Competition organizers at Oberlin College use an interactive Campus Resource Monitoring System to provide students instant feedback on their resource use compared to other halls. Students can visit the website to see how much energy each dorm is using. During their energy use competition, Oberlin documented a greater than 50% reduction in electricity use in dorms with real-time feedback. View Oberlin's Campus Resource Monitoring System at www.oberlin.edu/dormenergy.

If you do not have the resources for creating a website or installing new monitors to show resource use, at least try to provide a few updates throughout the competition. If the competition lasts one month, you can update the rankings weekly. If the competition lasts several months or a whole semester, you can get away with monthly updates. Make sure the updates are posted on a prominent website or are emailed to all participants so everyone stays on the same page.

Usually campus projects and initiatives are competing for students' attention. When possible, look for opportunities to integrate the competition into other activities, campaigns, and projects on campus. If you can tie the competition to other events on campus, you can cross-publicize and both events can receive more student attention. For example, when students at Furman University were wrapping up their "Kill-a-Watt Challenge," they learned that the band Guster was going to be playing on campus. Instead of announcing the winner immediately, they waited and asked the band to announce the winner during their concert!

No matter what kind of publicity campaign you design, always remember to show excitement and enthusiasm for the competition. Any negative comments or questions could dissuade students from participating or taking the competition seriously. Keep a positive attitude, even when you are writing an email or talking on the phone, and your enthusiasm will spread!

Kick-Off

It is easy to ignore a flyer or overlook an email, so meeting students face-to-face is often the best way to get everyone excited about the competition. In fact, the Environmental Alliance at Duke University found that personal interaction with

students in the competition goes a long way. Holding a kick-off event to launch the competition will help generate some publicity and get students excited about saving resources. At the kickoff event, you can identify enthusiastic students who are willing to help with the competition and let students see how easy it is to start conserving immediately!

There are two highly successful ways of reaching out to students through a kick-off event. You can either bring the students to you, or go to them.

Kick-off Party

One kind of successful kick-off event is similar to any other party with food, friends and fun. These events are the perfect occasion to show a green film, have a raffle, or publicize conservation tips. The idea is to get people there and get them excited about the competition.

At the kick-off party, you can actually *show* students how easy it is to have fun while using less electricity or water by conserving resources at the party. For example, you could have a "Do It in the Dark" party, where you use candles and items that glow in the dark instead of lights. Similarly, you can use acoustic music instead of a stereo system. Be sure to have several signs and posters with several tips for how to conserve resources.

Remember, the idea is to talk to students face-to-face. Designate a few volunteers to go around talking to students about the competition, recommending tips and asking if they have any questions. Be sure these volunteers have a quarter-sheet or post-card size flyer to pass out to students about the competition that also recommends tips and has a phone number or a website where students can find out more information about the competition and how to get involved.

As you already know, parties cost money, and a kick-off party is no different. Try to partner with other groups and departments to cover some of the costs and get involved early.

Dorm-Storming

Dorm-storming is another effective way to reach out to students. Dorm-storming is when you canvass a dorm and go door-to-door to talk to students face-to-face about the competition. It is usually much easier to engage students about electricity and water use in their dorms when they are sitting in it.

The best time to do a dorm-storm is when most students will be in their rooms. Usually, Sunday evenings after dinner is the best time because most students are home studying. If you work with Resident Assistants, you could even coordinate a hall or dorm meeting where you could give a short pitch about the competition.

While a dorm-storm usually requires several volunteers, you can easily divide and conquer with a few volunteers storming each dorm. Obviously, the more volunteers you have for the dorm-storm, the less time it takes. However, you can spread the dorm-storm over a couple of days. Duke University's Environmental Alliance recommends using 2 volunteers for each small or medium sized dorm and 3 or more volunteers for larger residences.

General Tips

Whether you are dorm-storming or having a party, there are a few tips that apply to both scenarios.

- *Take-home flyers*: It is a good idea to have a small quarter-sheet or post-card size flyer to remind students about the competition. The flyers should provide a few tips and let students know where they can find out more information about conserving resources or getting involved. If you have a party, make sure every student leaves with a flyer. If you are dorm-storming, leave a flyer with each student—slide a flyer under the door when students are not home.
- *Talking Points*: It is a good idea to provide volunteers with talking points so that all residents get the same message. The talking points also help nervous volunteers remember what to say.
- *Finding New Volunteers*: Dorm-storming and kick-off parties are both good ways to recruit new volunteers to help with the competition. Do not let them get away! Make sure that dorm-stormers have sign-up sheets and that you have sign-up sheets at the party.
- *Handling Negative Students*: Even though you are trying to generate excitement about the competition, you will probably run into students with negative attitudes toward conservation. Sometimes these folks will want to debate or bring down your volunteers' excitement and enthusiasm about the competition. Do not let them bring you down! Encourage volunteers to let the debates go and focus on reaching out to interested students and finding new volunteers.
- *Pair Up*: For many students, talking to strangers about the competition can be intimidating, especially if they run into too many negative attitudes. Having volunteers pair up provides moral support as they visit students at the party or dorm-storm.

Light Bulb Exchange

Many students have desk lamps or other light sources in addition to the ones permanently installed in their rooms. Many schools use fluorescent lights in the permanent fixtures to save the school money and so the bulbs will not have to be replaced as frequently.

Students usually put incandescent bulbs in their own lamp. Compact fluorescent light-bulbs (CFLs), like the one shown at left, last up to 10 times longer than incandescent bulbs and use much less energy.

One effective way to get students on their way to conserving energy is to provide them with free CFLs for their personal lamps. Of course, CFLs cost money, but there are several options for paying for the bulbs. First, try to find a hardware store that will donate the CFLs in exchange for free advertisement. Otherwise, see if you can partner with a university department or other student group to provide the bulbs. If you have to buy the bulbs, www.1000bulbs.com provides wholesale CFLs cheaper than your neighborhood hardware store. If you do have to order the bulbs, make sure to place the order in enough time to have them for the kick-off event.

The Light Bulb Exchange might be many students' first experience with compact fluorescent lighting, so you want to make sure it is positive. That starts with picking bulbs that have nice light, turn on quickly, do not contain mercury and will fit in most lamps. If you have enough time, get a sample in advance to make sure you pick the right bulb.

Ideally, you will trade students a free CFL for their incandescent bulb. This is because you want to make sure that they are actually using the CFLs and that all those incandescent bulbs do not end up in the trash. If you have a party, advertise the light bulb exchange in advance, and ask students to bring an incandescent bulb to trade for an energy-efficient CFL. Make sure you have a box there to collect all the incandescent bulbs. If you are dorm-storming, the volunteers can take the CFLs in a backpack or tote bag, which they can also use to collect the incandescent bulbs. Finally, you can donate the incandescent bulbs to a shelter or take them to a recycling center.

Feedback

How will you know if the competition was successful? Were students excited about the competition? What could have been done better? One way to find answers to these questions is to ask your peers. Creating a feedback survey is an effective way to hear comments about the competition and find out what needs improvement.

The survey should not be too long, but should be thorough enough to gain a sense of how students liked the competition. A survey is also a good way to get feedback about a specific aspect of the competition, and it can help you improve the competition tremendously.

A feedback survey will only work if students participate. Sometimes students need an incentive to take the survey, especially if they are graduating and will not be around for the new and improved version of the competition. One way to

encourage participation is to enter everyone who fills out the survey into a raffle for a prize. The prize does not have to be big to encourage students to fill out the survey.

Also be sure to send a survey to and/or speak with the university contacts that helped you establish the competition. They might have ideas on how you can improve next year's (or semester's) event.

Send thank you notes

Be sure to send thank you notes to the faculty, staff, and students that helped you to make the competition a success. Let them know the general results of the competition and that their help was pertinent to its success. You also might want to include a note on how you are looking forward to working with them in the future. A thank you note to show your appreciation will also help you to build positive relationship for future collaboration.

Conclusion

Successful projects tend to galvanize student groups. Often student environmental organizations struggle to get other students involved in campus climate and energy issues. A conservation competition, however, is an interactive opportunity to get other students involved and excited about conserving our energy and water resources. Hopefully this tool will help you to organize a successful competition on your campus. Good luck!

Appendix A: University of New Hampshire Sample Energy and Water Conservation Tips

Energy and Water Reduction for Beginners

Energy

Lights

- ☐ Open your shades for natural light when you are indoors (particularly in your room)
- ☐ Turn off lights when you leave ANY room (e.g. bathroom, the shower, common rooms and classrooms).
    - o *Even if leaving for a very short time it saves energy to switch it off. It is also NOT true that leaving fluorescent lights on saves energy!*

Appliances

- ☐ Turn off ALL appliances (e.g. space heaters, stereos, printers) when not in use.
- ☐ Unless you are handicapped, do not use automatic handicap doors.
- ☐ Clean the dryer filter before and after each use to improve air circulation and drying if you must use the clothes dryer.

Computers

- ☐ Activate your computer's power management options.
- ☐ Set your computer monitor to sleep after 10 minutes of inactivity.
    - o *Screen savers do not save energy but sleep settings do.*
- ☐ Turn off computers & monitors when not in use for an hour or more.
    - o *Turn off computer monitors if just going out for a short time*

Heating and Cooling

- ☐ Close entrance doors when they are propped open.
- ☐ Keep windows and doors closed in heated and air-conditioned areas. Use the thermostat rather than the
- ☐ window to control the room temperature.
    - o *If your thermostat doesn't work let someone know.*

Water

- ☐ Turn off the water while brushing your teeth - Turn off the tap until you need some more.
- ☐ Only wash full loads of clothes.
- ☐ Take shorted showers
- ☐ Do not use the shower as a sauna or a means of steaming the wrinkles out of your clothes.
- ☐ Do not use toilets as a trash can.
- ☐ Rinse your razor in a little bit of water (in the tub or sink) rather than running water constantly.
- ☐ Wash dishes in the kitchen sinks rather than the bathroom so that the drain can be plugged up so as to avoid running the water more than necessary.
- ☐ Check for and report leaks and drips in sinks, showers, and toilets - Report any leaking faucets and running toilets to maintenance

Reducing Energy and Water for Intermediates

Energy

Lights

- ☐ Turn off decorative lighting.
- ☐ Study with friends to reduce the number of rooms with lights on

- ☐ Study outside, in the library, or other public spaces
- ☐ Replace bulbs with lower-watt bulbs
    - o *Compact fluorescent lights use 75% less energy then incandescent lights.*
- ☐ Don't use Halogen lamps.
    - o *One Halogen lamp stand draws more power than the average computer!*

Appliances

- ☐ Unplug appliances that are not being used or turn off the power strip or surge protector.
    - o *Most appliances (e.g. TVs, VCRs, cordless phones, microwaves, cell phone chargers) consume energy **even when switched off**. As much as 10% of energy use for appliances is consumed in these "vampire" energy charges when appliances are off or after it has been fully charged.*
- ☐ Share a fridge with your roommate or friends and unplug yours.

Computers

- ☐ If possible, use ink-jet printers since they consume 95% less energy than laser printers.
- ☐ When you can use laptops, since they use 90% less energy than desktop computers.

Heating and Cooling

- ☐ During the heating season open blinds to let sun in or, if there isn't any sun, close them to trap the heat in. During the cooling season close blinds, drapes and curtains to block sun.
- ☐ If you can, turn down your thermostat.
    - o *For each degree you lower your heat between 60-70 degrees, you save up to 5% on heating costs. Set the thermostat to 55 degrees at night or when away to save 5-20% of heating costs.*
- ☐ Avoid using personal space heaters, which use a lot of energy.

Water

- ☐ Wash clothes in warm or cold water, not hot - Remember: only wash full loads.
- ☐ When washing dishes by hand use a sink full of water instead of running water.
- ☐ Buy a timer and leave it in the shower so that people can take set a time limit **for themselves**.
- ☐ Ask about turning down your building's hot water if it's too hot.
- ☐ Talk to fellow women about not running the water while they use the bathroom.
- ☐ Check for and report leaks and drips in sinks, showers, and toilets - Report any leaking faucets and running toilets to maintenance.

Reducing Energy and Water for the Advanced

Energy

Lights

- ☐ Keep the lights off in your room constantly and study or hang out outside during the day, in the hall where the lights must stay on, or in public spaces.

Appliances

- ☐ Don't turn on the TV.
- ☐ Share a clock with your roommate.
- ☐ Combine laundry loads with friends so that you only do full loads.
- ☐ Air dry your laundry using a drying rack in your room.
- ☐ Use the dorm fridge and unplug those in your room.

Computers

- ☐ Laptops use 90% less energy than desktops – if you don't have access to one, borrow a friend's.

Heating and Cooling

- ☐ Forget the heater – put on a sweater!

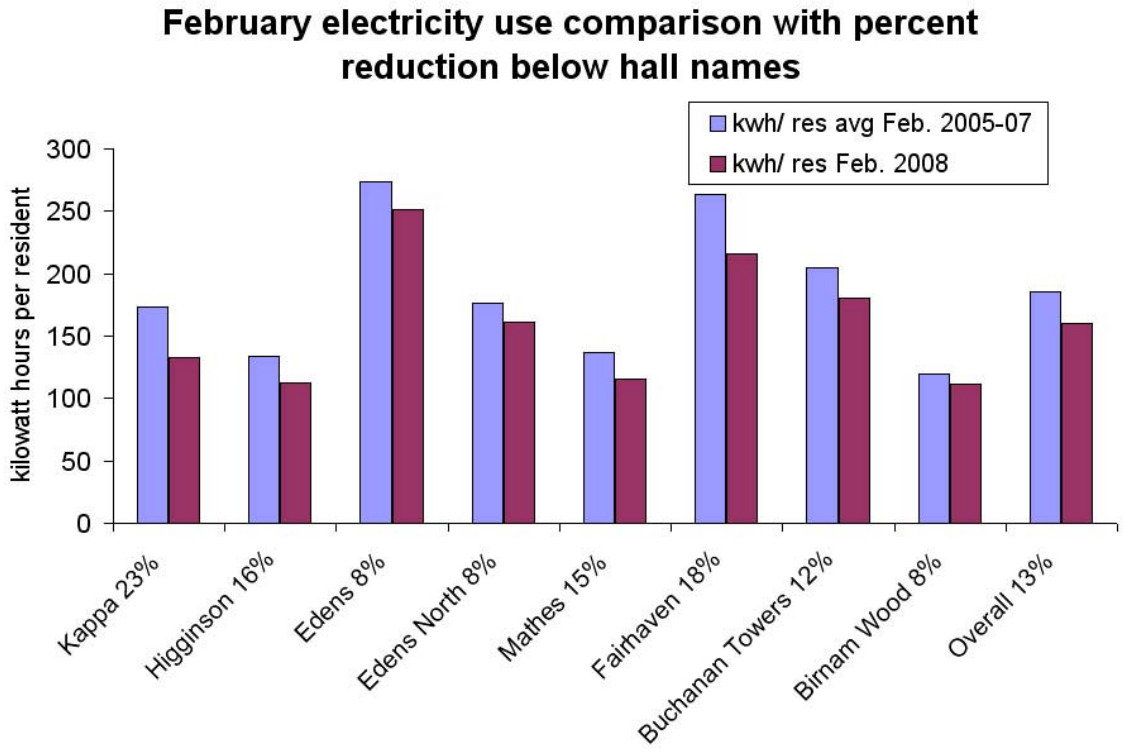
Water

- ☐ Don't flush the toilet after just peeing.
- ☐ Turn off the water when soaping up in a shower and run the water only when rinsing.
- ☐ Collect grey water for plant watering - Put a container in the shower with you to collect water that would otherwise go down the drain.

Reducing Energy and Water Like Never Before

- ☐ Forget those energy consuming cell phones, communicate with ESP
- ☐ Don't wash your clothes
- ☐ Don't shower
- ☐ Don't ever turn on lights

Appendix B: Sample Competition Results Graph



Comparative graphs such as this one from Western Washington University provide students with feedback that shows them how their efforts compared to the efforts of students on other halls. It also provides a visual representation of conservation rather than simply giving a percentage reduction.

Appendix C: Recycle Mania Volume-to-Weight Conversion Chart

Volume-To-Weight Conversion Chart

The following conversion estimates are approved for schools to use in the RecycleMania competition. For questions about the conversion chart or estimating weights, email or call the helpline, recyclemania@nrc-recycle.org or (202)-903-0851.

Unless otherwise noted, all figures are from averaged ranges published in *Measuring Recycling: A Guide for State and Local Governments*, by U.S. Environmental Protection Agency; Washington: 1997.

1. "Recycling Data Report," California Integrated Waste Management Board; Sacramento: 1996.
2. Based on CURC Standards Committee, peer reviewed estimates.
3. Based on RecycleMania Steering Committee estimates

Paper (All grades loose and unbaled)		
Newspaper:	433 pounds/cubic yard	4.62 cubic yards/ton
Office paper:	568 pounds/cubic yard	3.52 cubic yards/ton
Mixed paper: 1	484 pounds/cubic yard	4.13 cubic yards/ton
Magazines	950 pounds/ cubic yard	2.11 cubic yards/ton
Corrugated Cardboard		
Flattened boxes, loose:	100 pounds/cubic yard	20 cubic yards/ton
Containers (cans, bottles, jars)		
Commingled cans, glass and plastic bottles:	200 pounds/cubic yard	10 cubic yards/ton
Whole glass bottles (0-10% broken):	600 pounds/cubic yard	3.33 cubic yards/ton
Aluminum cans (whole, unflattened):	63 pounds/cubic yard	31.75 cubic yards/ton
Steel cans (whole, unflattened):	150 pounds/cubic yard	13.33 cubic yards/ton
Plastic bottles (whole, unflattened):	36 pounds/cubic yard	55.55 cubic yards/ton
Single Stream		
(Containers, paper, cardboard) 3	139 lbs/ cubic yard	15.46 cubic yards/ton
Food Waste		

Appendix D: Energy Conservation Competitions at 4 U.S. Universities: A Precedence Study

By Nelson Harvey, New York University

Oberlin College

Director/coordinator: John Petersen (Associate Professor of Environmental Studies), (440) 775 6692.
Additional Contacts: Adam Hull, (student coordinator) dormenergy@oberlin.edu, Nathan Engstrom (Campus Sustainability Coordinator), (440) 775-6354

Overview: Oberlin's annual two-week energy conservation competition is probably the premiere contest in the nation in terms of monitoring, quantifying and publicizing energy use and savings. The competition, which takes place from April 6-20th each year, relies on the Campus Resource Monitoring System, an interface developed with financial assistance from the EPA's "People, Prosperity and the Planet" program and the Ohio Foundation of Independent Colleges. A team of Oberlin faculty and students developed the system as part of an effort to examine the effect of feedback and incentives on resource conservation. In their initial experiment, the team installed off-the-shelf electricity and water monitoring technology in two dormitories. The team then installed wireless data-logging hardware in these dormitories and developed software to translate collected data into online, graphic displays. A two-week competition was launched between the two equipped dormitories and 16 others, which were informed of their consumption just once a week. By the end of the contest, the dorms had reduced their electricity use by 32 percent overall. However, the average reduction for dorms outfitted with the sensors was 55 percent, compared to just 31 percent for those dorms without monitoring equipment. Since the first contest, this technology has been applied to 16 additional dorms. The results can be viewed at http://www.oberlin.edu/dormenergy

The energy, financial and greenhouse gas savings from the most recent competition are still being worked out, but the first competition that Oberlin held resulted in savings of 68,300 kWh of electricity, $5,107, and 148,000 lbs of carbon dioxide. Because the town of Oberlin gets much of its electricity from coal fired power plants, the competition typically offsets a considerable amount of greenhouse gas emissions.

Comprehensive research papers detailing the methodology and results of the Oberlin experiment can be viewed at http://www.oberlin.edu/dormenergy/news.htm

Structure: Oberlin's dormitories feature several different types of metering technology; some are metered by wing or by floor, but all the buildings that compete in the annual contest are at least metered individually by building. (This is the case for 18 dormitories, or all but 7 of the dormitories on campus). All the competing dormitories are outfitted with the Campus Resource Monitoring System, which allows students in the dormitories or outside observers to monitor the usage of a given dormitory online. The web interface is updated every 20 minutes with new consumption information, and it allows users to compare dorms to one another, view per-person consumption, or see consumption in

terms of several different units, including economic cost, carbon emissions, or mercury emissions.

Like many college campuses, Oberlin has some dormitories that include kitchens or dining facilities. In order to ensure fair competition, these facilities have been metered separately in the buildings in which they exist, and they are not included in calculations of power use for those buildings. On the dorm energy website, there is a separate section for kitchens and dining halls.

The Oberlin competition is judged by comparing each dormitory's performance over a two-week period to a pre-established baseline. The baseline is an average of its consumption over the previous semester, and a dormitory's score for the competition is derived from the following formula:

100 x [(average baseline period rate) – (average competition period rate)/ (average baseline period rate)= score

An Environmental Studies 101 class handles publicity for the competition, producing posters and fliers and conducting peer-to-peer outreach inside and outside of the dormitories. Adam Hull, a student coordinator of the event, said that organizers tried to employ RA's to handle publicity, but varying levels of enthusiasm made it likely that some dormitories would be underexposed to the competition relative to their neighbors.

Oberlin does not treat their winners to the same level of prize money that schools like Bowdoin do, opting instead for "a trophy, an ice cream party, and bragging rights," according to Sustainability Coordinator Nathan Engstrom. At present, financial savings from the competition are not redirected in any particular way, although Engstrom would like this to change. "I would like to see the college set aside the money saved during the competition and either re-invest it in additional energy saving improvements or return it to the students," he said. Organizers also said they would like to receive a higher level of post-competition feedback from students, perhaps by re-introducing the survey that was distributed in the wake of the first competition (see "Lessons, Challenges and Obstacles)."

Funding: The Environmental Protection Agency provided $10,000 in seed money for the project. This covered the installation of wireless monitoring technologies in 2 Oberlin dormitories. It is not known where funding for the additional dormitories came from, although it is believed that it was included in campus administrative budgets. Organizers rely on an introductory environmental studies class to conduct publicity for the event, and students and paid Oberlin staff carry out the contest, so it poses very few costs to the university.

Lessons, Challenges and Obstacles

The Power of Feedback: In the initial experiment by Oberlin researchers, dormitories provided with real time monitoring equipment on their building's electricity usage achieved average usage reductions of 55 percent, while those without such equipment (and informed of their usage only once per week) achieved reductions of just 31 percent on average. This strongly suggests that the availability of real time feedback on energy

consumption can significantly raise awareness and influence behavior in the direction of conservation. The correct resolution for such feedback will likely vary on a case by case basis, but the Oberlin researchers found that students provided with feedback on the energy usage of their individual floor did not conserve more energy than those provided with feedback on the energy usage of their building as a whole. Therefore, as the researchers noted in their study, feedback on whole-building usage may be sufficient to encourage conservation in a dormitory setting.

Post Competition Survey: After Oberlin's first two-week competition, the team that installed the Campus Resource Monitoring System conducted a survey of 418 student participants. The survey contained questions about preferred methods of energy conservation that the students had used, as well as their attitudes regarding the competition in general. Analysis of survey results revealed that the most common strategies for energy conservation during the competition were turning off lights when the bathroom was unoccupied (72 percent did this), turning off dormitory lights when the room was unoccupied (70 percent did this), and using natural lighting during the day (59 percent did this). Other common strategies included turning off computer monitors and computers when not in use. 51 percent of students said that they would continue using energy conservation strategies beyond the competition and outside of Oberlin dormitories.

The University as a Business Incubator: During the design of the Campus Resource Monitoring System, the Oberlin research team realized that no tool–or even combination of tools–existed that could remotely log building data, interpret it, and present it in a web format. Shortly before they were granted funding by the EPA to implement their system, several members of the team launched the Lucid Design Group, a company that uses the technology developed by the Oberlin researchers to highlight the benefits of green building features and visualize resource use for schools and other institutions. Today, the company has served a wide range of clients, from an Aquarium in Camden, NJ to an elementary school in Williamstown, MA.

Harvard University

Director/Coordinator(s): Philip Kreycik, Resource Efficiency Program Coordinator 617-384-9605, philip_kreycik@harvard.edu

Overview: Harvard's energy conservation competition is part of a larger annual environmental contest on campus called The Green Cup. The contest, which features participation from 12 Harvard dormitories, pits students against each other to see which dorm can achieve the best environmental performance in 4 areas: energy conservation, recycling and waste reduction, Eco-projects (each dormitory may feature several project teams) and greening of House Council events. (House Councils are a form of dormitory government). Energy conservation counts for 20 percent of a dormitory's score in this competition.

Unlike the other competitions examined here, Harvard's is aimed at reducing consumption of heat as well as electricity. As a result, students use a wider range of tactics to win the competition, such as finding drafts and encouraging building managers to replace broken dormitory windows, in addition to unplugging appliances and turning off computers.

The competition at Harvard is longer than most, lasting from September 20th until March 20th, a period of roughly 7 months. Phillip Kreycik, coordinator of Harvard's Resource Efficiency Program, said the length is due to uncertainty about the precise date that meter readings take place in the dormitories each month. Extending the competition over several months is intended to minimize the influence of different meter-reading dates for different dormitories.

Since the Resource Efficiency Program was implemented in 2002, overall energy usage (including heat and electricity) is down 14 percent in Harvard undergraduate dormitories. Kreycik said this could be due to several factors in addition to the Green Cup, including increased general awareness of the importance of energy conservation and ways to conserve, the transition from desktop computers to laptops, and lighting upgrades.

Structure: The competition takes place over 7 months (from September 20th to March 20th), and includes 12 undergraduate dormitories, all of which are individually metered. The Resource Efficiency Program informs students of their consumption status once each month by downloading monthly utilities reports from University Operations Services.

The electricity component of the Harvard competition is scored by comparing the electricity usage for the 7-month competition period to an average of the last three years of usage during that same period. Kreycik notes that per-capita power usage is inappropriate as a metric because of structural and lighting differences between dormitories. Comparing one dormitory to its average historical use provides a more equitable measure of the most improved dorm from one year to another. According to the Green Cup website (http://www.greencampus.harvard.edu/greencup), the campus Office of Physical Resources advises competition organizers on how to adjust for variations in weather and building renovations.

Green Cup publicity takes many forms, and student participation is high as a result (see "Lessons, Challenges and Obstacles)." Under the Resource Efficiency

Program (similar to a student version of the "sustainability warden" program at the University of British Columbia), 16 student representatives and three captains (all paid) advertise in the dorms and around campus through tabling, posters, and other means. These representatives also hold special events with attractions like free ice cream to publicize the competition, and organizers strive to involve RA's, tutors and other campus figures in advertising as well.

Funding: The FAS Office of Physical Resources provides funding for the Harvard competition; in the year 2006/07 the prize money for the winning dormitory was $1039. Ice cream study breaks were also awarded to the top three dorms.

Lessons, Challenges and Obstacles

Accounting for Meter Reading Disparities: Harvard stretches its competition over seven months in part because organizers do not have access to the date that the electricity meters in dormitories are read each month. Some meters may be read on different time intervals from month to month (i.e. every 28 days rather than every 30 days), and these discrepancies can significantly affect monthly usage numbers. As Kreycik notes, "if [the meter reading is] 3 days off, which is not unheard of, that potentially changes the result by 10%, since a month is only 30 days." If facilities managers at a given university are unable to provide the dates on which the meters are read, it may be worth extending the length of the competition to insure accurate monthly numbers.

Measuring Contest Effectiveness: Organizers of the Harvard competition were interested to know whether their efforts were boosting student awareness and pushing people to conserve energy, so they included questions about the Green Cup in a student sustainability survey. Kreycik reports the results:

> Over 4 of 5 upperclassmen know about the Green Cup, and a high percentage reported having taken action in the Green Cup (81% overall), specifically to recycle more (60%) and conserve energy (67%). The primary reported motivating factor was "care for the environment," from which 78% reported deriving "a great deal" or a "moderate" level of motivation, followed by "house pride," with 45% of responses in these categories. The monetary prize for the house motivated 29% of respondents at least moderately.

Conducting a post-competition survey may provide useful metrics for evaluating the success of the competition, and could indicate whether it would be worth institutionalizing the effort once the pilot project is complete.

Bowdoin College

Director/Coordinator(s): Kiesha Payson, Facilities: (207) 725-3086
kpayson@bowdoin.edu

Overview: Bowdoin College, a liberal arts school in Brunswick, Maine with a student body of 1700, has run a one-month energy conservation competition in campus dormitories since 2001. 18 dormitories participated in the 2006 competition. Organizers struggled during the first couple of years to encourage the participation of upperclassmen, but in recent years, "students who have no interest in sustainability still compete in this," according to Keisha Payson, the chief organizer of the competition and an employee of the Facilities Management department.

The Bowdoin competition takes place during the month of October, and is distinguished by a high level of pre-competition advertising and a unique award structure. Prizes are given not only to the dormitory with the largest percentage energy reduction compared to its September usage, but also to the dormitory that improved its reduction most during the second half of the competition. In order to boost the enthusiasm of participants, dorms are paired with social houses (former fraternities on campus), and an additional prize is given for the best social house/dormitory team.

The 2006 competition resulted in a 17 percent decline in campus energy use overall, saving 52,228.5 kWh of electricity. This was a jump of more than 5 percent from 2005, when the competition reduced campus energy use by 13.1 percent.

Structure: All of Bowdoin's buildings are individually metered, making it possible to score the competition by comparing the September usage of each dormitory to its usage during the competition in the month of October. Whichever dorm achieves the largest percentage reduction from one month to the next is the winner. Students are not informed of how the usage baseline for their dorm is calculated, because organizers fear that if they knew, students would use excessive amounts of electricity during September to increase the percentage reduction they achieved in October. Instead, students are simply told that the baseline comes from "historical analysis of electricity usage in each dormitory."

Bowdoin's competition began in 2001 as a 1-week affair, and was extended the following year to two weeks in duration, then to one month in 2003. "People can do anything for a week," says Payson. "Extending it beyond that has a bigger impact in terms of reduction and awareness." Midway through the competition, employees of the Facilities Management Department read the meters at each dormitory, and inform students of their performance through a mass email. This is the only information that students receive about their usage until the end of the competition.

Organizers do a large amount of advertising before the event, putting posters around campus and placing ads in student publications and on the campus radio station. In addition to laying the ground rules for the competition, the posters suggest several ways that students can conserve energy. (For text of a Bowdoin poster, please see Attachment #1). In the dormitories of first year students, each floor has a designated "eco-rep" who raises awareness about the competition and other environmental initiatives, and the Office of Residential Life is also enlisted so that Resident's Assistants (RAs) can publicize the program in their dormitories. Finally, the

Bowdoin Office of Sustainability publishes news of the contest in the "InSTALLment," a monthly newsletter plastered to the walls of bathroom stalls.

Another important strategy for increasing student participation at Bowdoin is the use of pledge sheets. Organizers request that participating students sign a pledge sheet to indicate their intent to conserve energy during the contest. The sheets are displayed publicly in an attempt to foster a sense of accountability among participants. Signatures of prominent campus figures (the college president, for example) are collected and highlighted on the sheets.

Perhaps no incentive is more effective than the prize money that Bowdoin offers to competition winners. In 2006, the school gave winning dorms a total of $600 worth of prizes. The dorm that reduced its energy use most won $200, to use for the purpose of its choosing.

Funding: The $600 in prize money offered each year comes from the budget of Bowdoin's Office of Sustainability, and it constitutes about 4 percent of the budget. The competition carries few additional costs, since eco-reps and full time Bowdoin staff carry it out.

Lessons, Challenges and Obstacles

The Power of a Pledge: In order to maximize student participation in the competition, organizers at Bowdoin ask that students sign sheets pledging that they will strive to conserve energy during the competition. "We rely on the social marketing assumption that people are more likely to do something once they have actually signed their name to it," says Payson. Some eco-reps or RA's post pledge sheets in dorm hallways, publicizing the list of individuals who has signed on to the idea so that others will notice and encourage each other to reduce energy use. Payson says that displaying the signatures of campus role models like the college president or top athletes can encourage participation. During "Maine Recycles," another annual environmental event, the Office of Sustainability publishes pledge sheets full of participant signatures in the Bowdoin student newspaper.

Lack of Automation: Students are informed of their performance two weeks into the competition via a mass email to the Residential Life list serve. Since metering is not automated, employees of the Bowdoin Facilities Management Department must go around to all of the dormitories and read the meters. They do this only twice–at the halfway point and at the end of the competition–because it is too time consuming to do more frequently. In the future, organizers hope to install a fully automated online system like that used by Oberlin College so that students can be aware of their performance throughout the entire competition.

University of California, Santa Barbara

Director/Coordinator(s): Mark Rousseau, Housing and Residential Services, 805-893-3092, mrousseau@housing.ucsb.edu

Additional Contacts: Ryan Schauland, (Sustainability and Energy Coordinator), 805 893-2661 ext. 2208, ryan.schauland@dcs.ucsb.edu, Perin Pellegrin, UCSB Sustainability Manager, 805-893-2661

Overview: UCSB's month-long energy conservation competition is unique for its frequency; it takes place once each quarter, except during the summer, meaning there are three chances to win each year. The competition is also set apart by its organizational structure; dorms are grouped by age and building type, and they compete only against other buildings in their group. Prizes are generous, although they consist of products rather than cash.

A team of student interns, who are financed in part by the local utility, Southern California Edison, conduct organization, planning and publicity for the competition. As a result, the timing and extent of the competition may vary from one quarter to another, depending on the student team in charge.

In the past, the competition has suffered at times from a lack of administrative buy-in. Nevertheless, it has resulted in substantial financial and energy savings for the university. The most recent competition saved the university about $30,000 kWh, or $4000.

Structure: There are three two-month competitions per year at UCSB; one per quarter except in the summer. Dormitories are metered on a per-building basis, although the university lacks an instantaneous feedback system like the one in place at Oberlin College. Thus, students are not informed of their energy consumption status until after the competition, when the UCSB Housing and Residential Services Department calculates the data and releases it to students. Although competition organizers had hoped to have usage data online for participants during the competition, they lacked the financial resources to implement the necessary system.

Like the other universities examined in this report, UCSB evaluated competition winners by calculating their percentage improvement over the course of a month compared to a previously established baseline. To derive a baseline, the Energy and Environment Coordinator for the Department of Housing calculated a three year average of usage for each dorm during the month that the competition takes place. Percentage improvements upon this average during the competition period constituted the score for a given dorm.

Although 12 dormitories competed in the most recent competition at UCSB, they did not all compete against each other. Rather, they were broken up into four groups based on age and building type, to minimize unfair advantages based on inherent efficiency or new equipment. For example, two tower buildings competed against each other, as did three low-rise buildings.

A team of student interns handled event publicity, which consisted of putting up posters in the lobby of each dormitory and updating the competition website. In addition, UCSB has Student Environmental Coordinators in each dormitory, and they made it a part of their job to advertise the competition, as did many RAs.

Prizes for the most recent UCSB contest consisted of products like iPod mini's (donated by the bookstore), longboard surfboards, and pizza parties for winning dorms. Many of the products were raffled off within dormitories. Prizes were paid for with

roughly half of the $4000 savings accrued through the competition. The other half of the savings went toward energy conservation measures on campus, according to Sustainability and Energy Coordinator Ryan Schauland.

Funding: The UCSB competition does not carry significant capital costs, since it relies on existing staff in the Facilities department, RAs, and Student Environmental Coordinators to carry out much of the project. However, the student interns who handle some of the organizing and publicity are paid through the Green Campus Program, an energy conservation effort funded by several California utilities (see “Lessons, Challenges and Obstacles).” Lack of funding has been a limiting factor in the UCSB effort; although organizers wanted to provide web accessible meters to students in all participating dormitories (in the style of Oberlin College), they lacked the necessary capital to do so.

Lessons, Challenges and Obstacles

Partnering with the Local Utility: In order to insure that the energy conservation competition went forward in spite of busy staff schedules, UCSB contacted the state Green Campus Program about providing small stipends for student interns to work on the project. Since the local utility, Southern California Edison, is a participant in the program, it provided funding for the interns.

Grouping Dormitories by Building Type: Rather than simply judging all of its dormitories against one another based on their historical usage, UCSB went a step further to insure fair competition and split the dormitories into four sub-groups based on building type and age. Depending on the relative age and construction of the dormitories in a given contest, this may be a worthy approach to consider. However, as Nathan Engstrom of Oberlin College noted, differences in building efficiency are likely to matter less in a competition dealing strictly with electricity than they would in a competition dealing with heating oil, since electric outlets are used for many items other than heaters and air conditioners.