



GREENSCHOOLS / GREEN CAMPUS UPDATE NEWSLETTER

Using Energy Efficiency to Strengthen Education



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ALLIANCE TO
SAVE ENERGY

Creating an Energy-Efficient World

GREEN SCHOOLS/GREEN CAMPUS

TEAM:

Merrilee Harrigan, Director of Education
Jo Tiffany, Sr. Program Manager
Swarupa Ganguli, Sr. Program Manager
Stephanie Campbell, Sr. Program Manager
Andy Coghlan, Assistant Program Manager
Jennifer Alvarez, Program Associate
Emily Curley, Program Associate
Peter Jenkins, Program Assistant
Matt Bevens, Intern

WATT'S NEW

Berkeley Interns to create "Green Sorority"

Hoping to Achieve Green Business Certification from the City of Berkeley



Green Campus Interns at UC Berkeley are working with the Psi Chapter of Alpha Delta Pi sorority to initiate a comprehensive campaign to promote sustainability in their chapter house and ultimately to achieve Green Business Certification from the city of Berkeley.

Green Campus drafted a "Green Sorority" proposal and will present it to the House Corporation Board sometime this month. Pending the Board's approval, Green Campus Interns will audit communal spaces in the house such as hallways, dining rooms, basements, and stairwells; they will also assist with calculating, quantifying, purchasing, and installing low-cost retrofits. Other ideas of sustainable activities that Green Campus Interns have for sorority and fraternity houses are buying in bulk, watering landscapes efficiently, reducing hot water usage, implementing recycling programs, and using less toxic products.

The interns will also work with the city of Berkeley's Green Business program to see what changes would qualify Alpha Delta Pi for the certification. This project will be a long term collaboration that will lay the foundation for spreading greener, sustainable living practices to more than 40 Greek chapters at UC Berkeley.

Jefferson Hunt Elementary School's Energy Conservation Club

Spreading the Word

The lead teacher of Jefferson Hunt Elementary school proudly reported at the Mid-Year Meeting for the San Bernardino Schools that they have begun an energy conservation club at the school with over **60 students** involved.

As one of its first activities, the club put together weekly energy conservation tips for everyone on campus to read on the bulletin board. The students made an underwater nature theme to their bulletin board asking other students to "Sea All the Ways We Can Save Energy." The students wrote their own energy saving tips in the bubbles.



The club members also proudly wear their Southern California Edison T-Shirts, which announce on the back "Energy Education Award Winner."

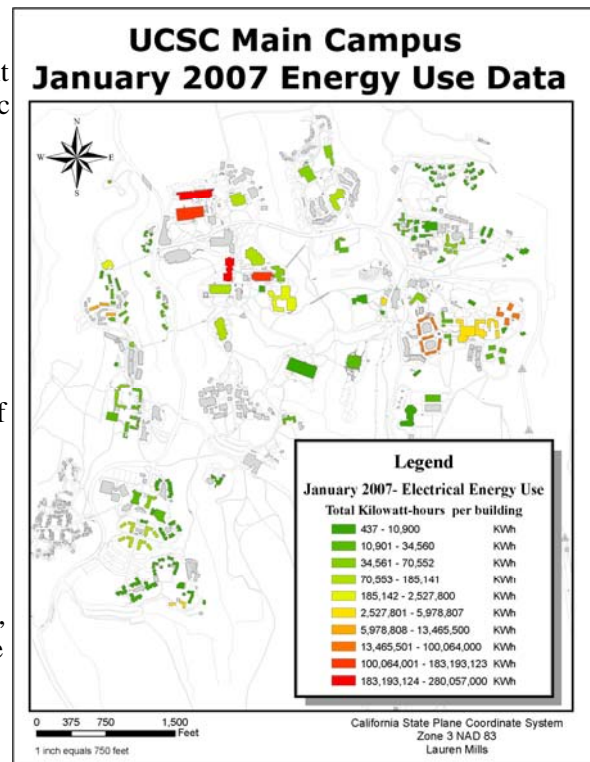
GREEN SCHOOLS & GREEN CAMPUS INNOVATIONS

Energy and Water Use Mapping at UC Santa Cruz

Using Geographic Information Systems (GIS) Software

UC Santa Cruz Green Campus Interns spent much of February working with Geographic Information Systems (GIS) software to create a campus map detailing water and energy consumption in campus buildings.

The maps will express consumption data in terms of total usage, usage intensity per square foot, and per capita usage. Interns are working on this project in collaboration with staff from Physical Plant, the Office of Budget and Planning, and the Office of Physical Planning and Construction. Previously, the data used for this project was dispersed between various campus departments, making it difficult to analyze building performance. Through this project, Green Campus is synthesizing the available data in a manner that is comprehensive and understandable to the campus public at large.



Once they are finished, Green Campus intends to use these maps as a motivational tool to encourage the campus community to conserve electricity and restrict hot water use. The GIS maps will also provide valuable feedback as Green Campus Interns track their project results. Eventually, the database will be institutionalized into the UCSC web services and may be maintained independent of Green Campus.

TRIVIA!

1. How many pounds of coal can be saved by switching one incandescent light to a CFL?
2. Why are incandescent lights so inefficient?

Interviewing Lab Occupants at UC Irvine

Educating about Fume Hoods

Green Campus Interns have come up with a method for reducing energy use by fume hoods, one of the biggest energy wasters in laboratory buildings on campus, and are beginning to educate their scientific community accordingly. A fume hood is a large piece of scientific equipment common to chemistry laboratories designed to limit a person's exposure to hazardous fumes. Fume hoods capture, contain and exhaust hazardous fumes created during laboratory experiments. The fumes are drawn out of the hood by fans through a port at the top of the hood. Pharmaceutical and biotechnology facilities have hoods, as do facilities ranging from industrial shops, to medical testing labs, university research labs, and even high school chemistry labs.

As fume hoods typically require large exhaust flows and are usually never turned off, they use a tremendous amount of energy both in fan power and in exhausted heated and cooled room air. The energy needed to filter, move, cool or heat, and in some cases, clean this air is one of the largest energy loads in most lab facilities.

In an effort to prevent energy waste by fume hoods, Green Campus interns at UC Irvine conducted audits and occupant interviews in all 12 labs in the Natural Sciences One Building last month. Interns interviewed between two and four occupants per lab about operation hours, equipment use, water use, and interest in participating in a Green Campus-led effort to reduce energy consumption.

Interns also informed lab occupants of five ways that they can save energy in the lab:

- Close fume hood sashes
- Turn off lights and unused equipment
- Put computers in sleep mode
- Upgrade equipment to Energy Star
- Defrost freezers



These activities were just the first step of a multi-stage project to reduce energy in the Natural Sciences One building and to accurately measure that reduction. Since fall 2005, UC Irvine Green Campus interns have been educating lab occupants about the need to shut fume hood sashes when the hoods are not being used for an experiment, however lack of good building-level energy data has prevented interns from quantifying the results of their efforts. To better measure the effectiveness of their efforts, Green Campus interns convinced Facilities staff to install a temporary sub-meter on one of Natural Science One's four floors. The interns will use this meter to collect baseline data for that floor. Interns will then conduct an education campaign on the metered floor, after which they will use their baseline data to measure the effectiveness of their campaign. While this means of measurement is not ideal, it represents great progress in UC Irvine Green Campus Interns' ongoing effort to quantify their program's impact.

If there is a laboratory at your school, the advice from the Irvine Interns can most certainly apply. Educate the science teachers at your school about the energy costs associated with fume hoods or post signs that enable users to close fume hood sashes when they're not in use.

SCHOOL & CAMPUS RESOURCES

Campus Progress Action Grants

Additional Support for Campus Initiatives

Campus Progress, a project of the Center for American Progress offers grants of \$200-\$1,000 to students working on innovative and hard-hitting education and advocacy campaigns.



They want to help students leverage their passion, creativity, ideas, and organizing talents to create progressive change on their campuses and in their communities. They list promoting clean energy as a potential project that would garner funding. They also suggest that they may be able to provide speakers or other non-monetary support for a campus event or other program.

Recipients of Campus Progress Action Grants not only receive funding for their issue campaigns; they also receive communications and messaging strategy and support from Campus Progress / Center for American Progress staff and access to policy experts on their issue.

Projects that are already receiving funding (such as Green Campus activities) may have less of a chance to receive additional money, but if there is a compelling event that your school is considering and you are in need of more resources, give it a try. For more information and to apply, visit <http://www.campusprogress.org/page/s/actiongrant>.

Step It Up 2007

National Day of Climate Action

On one spring day, **April 14th, 2007**, there will be hundreds and hundreds of rallies all across the country. The organizers of Step It Up 2007 hope to have gatherings in every state, and in many of America's most iconic places: on the levees in New Orleans, on top of the melting glaciers on Mt. Rainier, even underwater on the endangered coral reefs off Key West.

This is an opportunity for you to highlight how your school or campus energy efficiency activities can make a difference in cutting carbon emissions.

The purpose of the rallies is to send a message: For Congress to put America on a course to cut carbon emissions 80% by 2050. This is a less than 2% reduction per year. "Step it up, Congress! Cut Carbon 80% by 2050." As people gather, pictures of the rallies and actions will be linked together electronically, so before the weekend is out, the collective actions will be huge.

Step it Up is the largest day of citizen action focusing on global warming in our nation's history, a grassroots movement, organized online through word of mouth, email outreach and the online community. So far over 950 actions in all 50 states are scheduled to be held on April 14 as part of the National Day of Climate Action.

The organizing team is asking that people register their events online at <http://events.stepitup2007.org/signup>. Any type of event can be registered, so we encourage everyone to organize an energy efficiency activity or awareness building event and share it with the world through Step It Up. Help teach others how energy efficiency can be the cheapest, cleanest, and quickest combatant to global warming. They just ask that you send a picture of your event. Get all the details at <http://stepitup2007.org/> and see you on April 14th.

Earth Day

A Brief History

The first Earth Day was held 1970 - 37 years ago - as a response to wide spread environmental degradation. Senator Gaylord Nelson of Wisconsin called for an Environmental Teach-in or Earth Day to be held on April 22. Senator Nelson stated that Earth Day "worked" because of the spontaneous response at the grassroots level. He modeled it on the highly effective Vietnam War protests of the time. 20 million demonstrators and thousands of schools and local communities participated that first year.

Earth Day proved extremely popular in the United States and around the world. It brought 20 million Americans out into the spring sunshine for peaceful demonstrations in favor of environmental reform.



The first Earth Day is also credited with persuading U.S. politicians that environmental legislation had a substantial, lasting constituency. Many important laws were passed by the Congress in the wake of the 1970 Earth Day, including the Clean Air Act, laws to protect drinking water, wild lands and the ocean.

Now observed by 500 million people in 175 countries, and coordinated by the non-profit Earth Day Network, www.earthday.org, Earth Day is the **largest secular holiday in the world** .

This Earth Day why not draw on its roots and stage a Teach-In and grassroots response in favor of the environment. Even better, get out there and DO something. There are many energy efficiency projects that you can share with your community.

Here are some ideas: set up a tire pressure check point at your local gas station or car wash to educate drivers about proper inflation and improved gas mileage; print Change a Light Pledge forms and ask the school or neighborhood for commitments; offer small business audits to companies in the area to suggest energy efficiency upgrades that will help them save money and energy; and don't forget to install CFLs, insulate, turn down the water heater temperature, and program your thermostat in your own home. Come up with your own ideas and let us at the [Alliance to Save Energy](#) know what you did during Earth Day, and maybe your school will be featured in the next Update Newsletter!

Another way to get involved is through Youth Service America. National and Global Youth Service Day is slated for April 20-22nd this year, conveniently coinciding with Earth Day. On their website at <http://www.ysa.org/nysd/>, you can register projects that you (as a young person) or your students/school are doing, link up with a current project that's already planned in your area, and/or get materials to help you plan an event.

Trivia Answers:

- 1. Using a single 20-watt compact fluorescent bulb instead of a 75-watt incandescent bulb saves over 550 kWh of electricity over its lifetime. If your electricity is produced from burning coal, using a CFL would save 500 pounds of coal that would release 1,300 pounds of carbon dioxide and 20 pounds of sulfur dioxide, and a variety of other harmful pollutants.*
- 2. In an incandescent light bulb, electric current heats up a metal filament making it glow white-hot and give off light. The reason these bulbs waste energy is because only 5% of the electricity is actually used to produce light. The remaining 95% ends up as heat.*