

Cardinal Green

The Sustainable Stanford Quarterly Newsletter

VOLUME 6
WINTER 2009



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In This Issue

It's hard to believe that 2009 is coming to a close, but here it is and we can look back on several achievements in sustainability at Stanford. On October 19, Stanford's Energy and Climate Plan was released, a \$250 million initiative spanning a decade that could reduce the campus carbon impact by 20 percent below 1990 levels by 2020. Visit our updated climate action website for information about the action plan on the [Climate Action page](#).



Stanford's Cardinal Cogeneration plant is a primary source of GHG emissions

The design and pilot phase of the Building Level Sustainability Program is now complete and the results are encouraging.

Building 170 is holding a 20% average savings in electricity, the Arrillaga Alumni Center is showing a consistent 8% average electricity savings and IT Services (10 buildings) is averaging a 2% reduction from desktop computing-related savings. The average payback of these 3 pilots is 10 months. In addition, the Office of Sustainability, in partnership with the Woods Institute, Students for a Sustainable Stanford, and Green Living Council, will offer a 2-unit course, CEE/Earth Systems 109, Greening Buildings and Behavior this year to train student sustainability coordinators in Building Level Sustainability Programs. [Click here](#) for the syllabus of the course.



Our winter issue brings you more stories and advancements in programs, ranging from utilities rebates to student funds. There is also some news on winter closure planning and direction. Enjoy this issue and, as always, visit sustainable.stanford.edu for news, information, and resources.

Happy Holidays,

Fahmida Ahmed, Office of Sustainability

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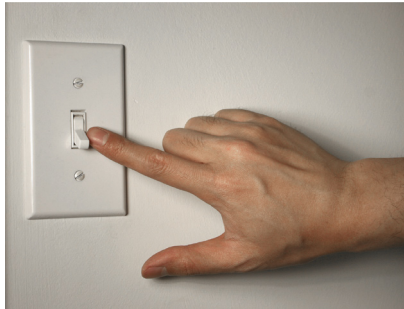
<http://sustainable.stanford.edu>

For related campus Sustainability news:

- Woods Institute: <http://woods.stanford.edu/news/newsletter.html>
- BGM: [Building Management eNewsletter](#)

Energy Savings — 2009 Winter Closure

Sustainability and Energy Management (SEM) and Building & Grounds Maintenance (BGM) are organizing the operational aspects of this year's annual Winter Closure. The goal is to maximize the opportunity of saving energy and reduce operating expenses. While Stanford is an institution that can never completely shut down, the hope is to work together and enhance Stanford's conservation efforts. Last year's effort saved the University almost \$260,000 in utility charges. The goal is to match that savings with this year's curtailment.



The University will shut down to the fullest extent possible beginning at the close of business on Friday, December 18, 2009 and reopen with the start of business on Monday, January 4, 2010. With prior planning and coordination of the shutdown with facilities managers located in each school and department, facilities staff will turn off heat and ventilation and cancel custodial services in areas not needed.

Normal electricity and domestic water service will be available at all times and an emergency plan to prevent freeze damage will be implemented if necessary. Staff experiencing a facilities-related problem during the Winter Close should contact the maintenance dispatch center by calling 723-2281.

Staff with personnel questions concerning the Winter Closure should address them to local human resources officers in each respective school or department.

Contact Susan Kulakowski, demand-side energy manager, at susank@bonair.stanford.edu or 723-4570 with any additional questions about the energy curtailment.

Self-Service Bike Repair Stations

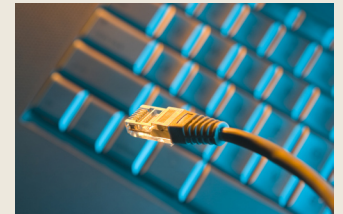
by Lisa Kwiatkowski, Parking & Transportation Services, Marketing and TDM Outreach Manager

There's a new bicycle safety repair station on campus at the intersection of Galvez Mall and Escondido in front of the Galvez module. The bike safety repair station offers free tools to enable bicyclists to make minor repairs and pump up their tires, making it more convenient for the campus community to keep their bicycles in good working condition. Multiple tools are securely fastened to the rack, which also serves as a bike stand. A second location is planned for the area near the School of Medicine by the end of December.

Send comments, questions, or suggestions about biking or the new bike safety repair station to bike-information@stanford.edu.



Desktop Computing: Shutdown & Unplug for the Holidays



Before heading out for the holidays, help save electricity by unplugging anything that has a glowing light in your office. In addition to your computer and monitor, unplug chargers, mp3 players and printers. Leaving them plugged in will cause a draw of 10-40 watts of electricity while you're out enjoying your time off with friends and family. Got everything plugged into a PowerStrip or SmartStrip? Be sure to turn it off as well for maximum energy savings.

Stanford Student Green Fund 2009-2010 Winners Announced

The Stanford Student Green Fund committee is proud to announce this year's fund winners for the 2009-2010 Student Green Fund program. The Stanford Student Green Fund provides grants for innovative student-driven projects designed to create a more sustainable campus. Compared to last year's inaugural year response of 25 applications (\$75,000 total requested funds); this year 19 applications with project request funds totaling \$95,000 were submitted for the committee's review. The winners were selected based on the projects' potential to achieve intended goals, as well as enable students to actively participate and make a contribution to campus sustainability. Project applications covered various topics, including social behavior, renewables, and food and garden initiatives.



Kairos Garden: planted as part of the Garden Campus Initiative, 2008 Green Fund winner.

The winners are:

- Salinas Valley Wind Resource (SWEP)
- Solar Initiatives Site Resource Assessment
- Campus Outdoor Recycling
- Campus Garden Initiative
- Sprig (PlugVIEW)
- Social-M Competition
- Organic Fertilizer for Stanford Lawns
- Water Catchment System
- Row House Sustainable Foods Education Program

Congratulations to all of the winners, who will be receiving close to \$30,000 in total! Visit http://sustainable.stanford.edu/green_fund for more details about each of the nine winning projects.

Student Story: 350.org

by Heather Benz, '10

The Stanford community bonded together on October 24 to show their support for strong climate change action at December's Copenhagen Climate Conference. The event was part of an International Day of Climate Action urging global leaders to stabilize atmospheric carbon at 350 ppm. In addition to student awareness efforts, dining halls across campus held a "Climate Conscious Food Week." Volunteers provided



Students participating at Stanford's 350.org event at The Oval.

information on the carbon impacts of food in each dining hall and signs provided simple suggestions to reduce individual carbon footprints, such as going meatless for a day or reducing dairy consumption. Photos taken from the Day of Climate Action will be sent to U.N. delegates and state leaders, along with photos from other communities across the globe.

Visit 350.org for more information on the event's success!

Student Story: Green Screenings

by Heather Benz, '10

On November 5th, students gathered at ten different locations across campus for the purpose of environmental education and fun. "Green Screens," an environmental documentary night put on by the Green Living Council (GLC), showed films ranging from Planet Earth to King Corn in dorms and houses throughout the night. Kevan Christensen, GLC president, said that he hoped the event would make environmental films more accessible to the average student, who may not be interested in biking across campus for a film showing, but would be willing to head down to the dorm lounge for one. The film showings were followed by discussion, which Christensen said were both educational and engaging. The Green Screens event is one of many that GLC has put on this quarter, as the organization, now in its third year, continues to grow and expand its presence on campus. This year marks the second year that the group has

Reducing Holiday Waste

by Julie Muir, PSSI

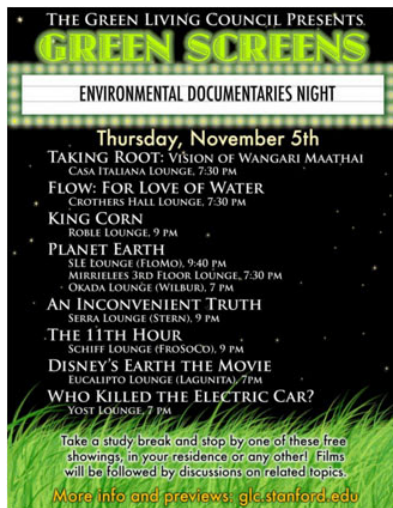
Americans throw away 25% more trash during the Thanksgiving to New Year's holiday period. Help reduce holiday waste:

Reusing just two feet of holiday ribbon will save 38,000 miles of ribbon. We could tie a bow around the entire planet!

Wrapping just 3 presents in reused materials would save enough paper to cover 45,000 football fields.

The 2.65 billion Christmas cards sold each year in the U.S. could fill a football field 10 stories high. Sending one card less would save 50,000 cubic yards of paper.

Visit <http://www.use-less-stuff.com/ULSDAY/42ways.html> for more tips.



puts on its fall quarter class on promoting behavior change, designed to help students create and implement sustainable intervention plans on a wide range of sustainability topics. Last year's class brought about projects, such as introducing shower timers and clothes drying racks into dorms. This year's projects promise to continue finding new ways to spread sustainability throughout student living quarters across campus.

Visit the Green Living Council [website](#) for more information.

Sustainable Information Technology: Educause

The Educause 2009 Annual Conference was held in Denver in November, and Sustainable IT was the topic for at least a dozen sessions. The topic has come far in just one year in terms of both number of discussion sessions, as well as depth of information. This year, Stanford made 2 presentations and led the Sustainable IT breakout session. Joyce Dickerson, Director of Sustainable IT, presented "Sustainable IT at Stanford - A Year in Review" where she highlighted Stanford's 2009 results for desktop computing, datacenters, and distributed server rooms. Dickerson was also featured as the GreenIT expert for the online conference, a web-only venue where IT leaders from around the world were able to participate in the event. Finally, the Sustainable IT constituent group met to discuss topics relevant to their own institutions. Topics and discussion notes are posted on the Sustainable IT Website at http://sustainable.stanford.edu/sustainable_it.



Sustainable IT at the Sustainable Valley Leadership Group Summit - December 2009

Ultra-Low Temperature Freezer Retirement Program

Over 350 laboratories and thousands of researchers across Stanford University are advancing biological and biomedical research and generating large collections of often irreplaceable, biological samples. These samples are scientifically and financially valuable to the researcher and the university, and they are growing at an escalating rate. To safely store the current sample collection, hundreds of scientific freezers across campus are needed that consume large amounts of energy, precious research dollars, and valuable space. Stanford's freezer collection is projected to consume 564,000 MBTU and generate 51,000 metric tons of CO₂ at an accumulated cost of \$69 million during the next ten years.



Stanford Sustainability and Energy Management (SEM) commissioned and completed a pilot project in 2009 to estimate potential benefits of room temperature sample storage using a new technology. Stanford supplied reagents and materials to twelve pilot laboratories from the School of Medicine and Biology Department. More information can be found on the [detailed report](#).

Given the growth expectations of Stanford's biological sample collection, in addition to application of new technology in the supply side, financial incentive is needed to support the demand side.

The Demand Side Management Program in Sustainability and Energy Management recently created a rebate program specifically tailored to reward the purchase of energy-efficient storage freezers. The freezers must be Thermo Scientific Forma 8600 Series single door upright models, or use no more than 18 kWh of electricity per day.

Stanford is counting on the electricity savings from freezer retirement to recover the cost of the rebate over five years. If the participant chooses to retire a freezer with no replacement you may not purchase additional ULT freezers for your lab until FY15 without refunding a pro-rated amount of the rebate.

For more information, visit the [Energy Conversation webpage](#) or contact Susan Kulakowski at susank@bonair.stanford.edu.

Sustainability on the Farm Tours

In the last few years, Stanford has made efforts to make Reunion Homecoming an example of the sustainability commitment and leadership. This year, the Office of Sustainability inaugurated a sustainability tour focused on campus operations to give a flavor of sustainable practices in place. Alumni were escorted around campus in the new hybrid Marguerite bus. Presentations in each area were provided by staff members both on the bus and on-site. Topics included water, waste/recycling, transportation demand management, energy, sustainable landscaping, and a shorter version of the Y2E2 tour.



Alumni tour group on the Y2E2 Malloy Terrace, one of the tour stops.

Visit the Sustainable Stanford website and [download](#) the tour handout for additional information about the tour and featured presentations.

Parking and Transportation News

by Lisa Kwiatkowski, Parking & Transportation Services, Marketing and TDM Outreach Manager

- **Stanford Recognized Among “Best Workplaces for Commuters”**

Stanford University has once again been recognized with the “Best Workplaces for Commuters” designation. This program provides qualified employers with national recognition for offering outstanding commuter benefits. In Stanford’s case, this includes offering employees and students free East Bay transit service, offering employees free train and/or bus passes, providing vanpool subsidies, and offering all eligible commuters cash and other incentives for using alternative transportation instead of driving alone to Stanford.



This recognition program was first established in 2001 by the U.S. Environmental Protection Agency (EPA) and U.S. Department of Transportation (DOT) to promote innovative solutions to commuting challenges faced by employers and employees. Employers that meet the National Standard of Excellence in commuter benefits – a standard created by the National Center for Transit Research (NCTR) and the U.S. EPA – can apply to be listed on the “Best Workplaces for Commuters.” Through partnerships with public and private sector employers, the program demonstrates that alternatives to drive-alone commuting, such as transit, carpools, and vanpools, are economically beneficial, yielding value to workers, employers, and the environment.

- **P&TS Launches Hybrid Bus**

On October 1, Stanford rolled out two new diesel-electric hybrid buses in its Marguerite bus fleet. The new buses are one of the many ways Stanford’s award-winning transportation program is reducing Stanford’s carbon footprint.

The new Marguerite hybrid buses are much quieter and 40 percent more fuel-efficient than Stanford’s regular diesel buses. The regenerative braking system kicks in each time the driver lifts his or her foot from the accelerator, helping to recharge the onboard batteries. The regenerative braking system also helps to slow the bus, dramatically extending the life of the brake pads.



For questions or comments about the Marguerite bus system, send an email to marguerite@stanford.edu.

- **Car Sharing Made Easier - Zipcar Offers New Applications**

Stanford has the largest university car sharing program in the nation, with 29 Zipcars at 13 Stanford locations. Now you can make your Zipcar experience even better by downloading new Zipcar applications for free. The new iPhone app lets you find and reserve Zipcars while walking down the street and you can even honk your Zipcar’s horn to help you find your Zipcar in the parking lot. Download the Zipcar app for iPhone, or visit Zipcar’s mobile device page at <http://www.zipcar.com/help/mobile> to learn about making, changing, or extending reservations for Zipcars using any mobile device, setting up text alerts, two-way texting, and downloading Zipcar apps for BlackBerry and Android.