

Cardinal Green

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The Sustainable Stanford Quarterly Newsletter



In this issue	1
Sustainable Purchasing Campaign Receives Record Pledges	1
Caretakers Go Green with BLSP Programs	2
SEI Highlights Stanford in Green Revolving Loan Fund Report	2
Sustainability Groups Welcome New Students	3
2010-2011 Green Fund Report	3
Stanford Energy Club (SEC) - 2nd Year of Success	4
SEM/CEE Solar Panel Tests	4-5
Outreach Coordinator Joins OOS	5
First High-Performance Building Still Performing at Jasper Ridge	6
Stanford at 2011 CA Higher Ed Sustainability Conference	6
Campus Greenhouses Light Up with LEDs	7
Charging Stations Upgraded to Meet EV Standards	7
New CFL and Toner Cartridge Recycling Programs	8
Green Fund Applications Due 10/31/11	8

Primary author and submissions:

Jiffy Vermynen -
jiffy.vermylen@stanford.edu

Design:

Terri Fitzmaurice -
terri.fitzmaurice@stanford.edu
<http://sustainable.stanford.edu>

In This Issue

Welcome back. The 2011-12 academic year has already begun with an emphasis on sustainability outreach. We unveiled a new issue of the [Student's Guide to Sustainable Living](#) and extended our outreach to graduate students. We are reinvigorating our [Cardinal Green](#) campaigns with incentives and success stories. You may ask - why do more outreach if the green evaluations have already been favorable? This past year, we earned 5th place in Sierra Magazine and 2nd place in Newsweek's green ranking. These are encouraging results and a validation of decades of implicit dedication to environmental sustainability. But we move forward with expanded outreach to renew our commitment, celebrate the campus' success, and realize the lasting benefits of a culture of sustainability. See our campaigns, read about our programs (in the newsletter and beyond), and let us know how we can continue to connect you to the growing momentum.

[Fahmida Ahmed](#), Office of Sustainability



Sustainable Purchasing Campaign Receives Record Pledges

In its first week, the [One Less, Save More](#) sustainable purchasing campaign, the fourth offering in the campus-wide [Be Cardinal Green](#) series, had record participation from the Stanford community. By the end of the six-week effort, more than 475 sustainable purchasing pledges were received. Purchasing and Contracts, in collaboration with the Office of Sustainability, launched the campaign to promote purchasing habits at Stanford that minimize negative impacts on the environment while appropriately supporting teaching, learning, and research needs. The campaign asked the Stanford community to consume less, consolidate orders, and choose reusable and recycled-content products. Compared to the same time period in 2010, the campaign resulted in the following improvements: 3% fewer orders, 9.5% cost savings in daily orders, and a jump from 63% to 89% of paper orders containing recycled content. Thank you to all who participated in the campaign and made it the most successful one to date!



Caretakers Go Green! LBRE Leads by Example with Building Level Sustainability Program

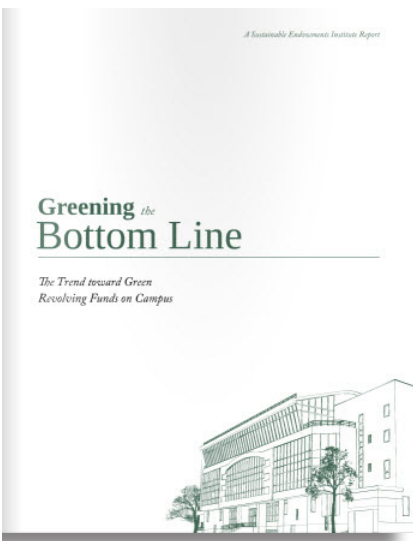


Stanford community during the upcoming Cardinal Green campaign to expand campus-wide BLSP participation.

In an effort to lead by example and pilot a clustered approach to implementation, Land, Buildings & Real Estate embarked on a [BLSP](#) rollout within nine Bonair Siding buildings. Led by a dedicated group of Building Champions, the “Caretakers Go Green” project takes advantage of new tools and resources available to support BLSP, including revised building audit templates and the [ERP Express rebate program for office equipment](#). Smart Strips and appliance timers have been deployed throughout the nine buildings, delamping is scheduled, and a pilot compost program will start in October. The Office of Sustainability will monitor electricity consumption throughout the fall and publicize results to the

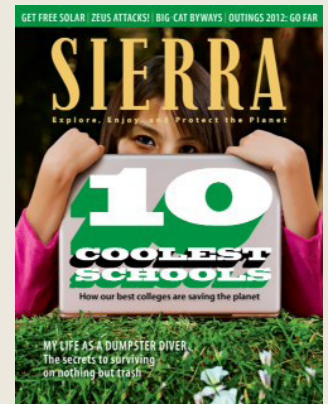
Sustainable Endowments Institute Highlights Stanford in Green Revolving Loan Fund Report

The [Sustainable Endowments Institute \(SEI\)](#), the organization responsible for the sustainability survey and evaluation published annually in the Green Report Card, opted to take a sabbatical this summer to focus on a detailed investigation of green revolving funds. As shown in SEI’s report, [Greening the Bottom Line: The Trend Toward Green Revolving Funds on Campus](#), the Energy Retrofit Program, the Whole Building Retrofit Program, and the Water Conservation Program contributed to Stanford’s having the largest fund size of universities surveyed, the most invested capital, and the greatest number of projects. As a follow-up, SEI published a [Stanford-specific case study](#) to explore these retrofit and conservation programs in much greater detail. With this publication, Stanford joins just nine other schools profiled for exceptional investment in efficiency.



5th Place “Cool Schools” Ranking

For the second consecutive year, Stanford placed fifth in Sierra magazine’s “Cool Schools” sustainability survey, making it one of the “coolest” schools in the country! Stanford improved its scores on Food and Purchasing questions and maintained last year’s perfect or near-perfect scores on Academics, Waste, and Other Programs/Initiatives. Published in the September/October 2011 issue of Sierra, the online feature story praises Stanford’s commitment to open space, comprehensive bicycling infrastructure, and free Marguerite shuttle system.



Newsweek Ranks Stanford 2nd Greenest University



Newsweek combined existing rankings from Sierra magazine, the Sustainable Endowments Institute, and College Power to determine its own list of the nation's greenest colleges. Stanford earned the second place spot in the ranking. The methodology for Newsweek's scoring, as well as a list of the top 25 colleges and universities, can be [found online](#).

Groups Host a Welcome for New Students

Please join us on October 17 for the "Keys to Sustainability at Stanford" reception on the lawn of the new Science and Engineering Quad at 5 o'clock in afternoon. This new event, co-sponsored by the Office of Sustainability, Earth Systems, the Precourt Institute for Energy, and the Woods Institute for the Environment, will provide a single setting for students to learn about the many operational, academic, and student-driven sustainability offerings. The event will serve as an easy and fun way for students to explore the wide range of opportunities to address sustainability issues on campus. Organizers hope for an attendance of 300 students. We hope to see you there!



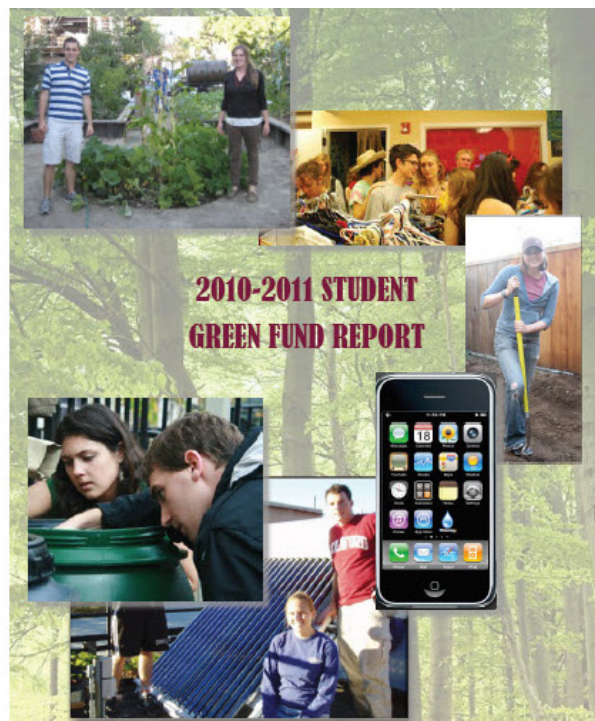
2010-2011 Green Fund Report Now Available

Inaugurated in the 2008-2009 academic year, the Stanford Student [Green Fund](#) provides grants for innovative student-driven projects designed to create a more environmentally sustainable campus.

In 2010-2011, nine student projects received funding and addressed topics ranging from a student-run campus thrift store to an iPhone application to reporting water leaks. The [2010-2011 Green Fund Report](#), which catalogs project successes, as well as all reports from past years, can be found online.

[Applications for 2011-2012 Green Fund grants](#) are now available. Interested students are encouraged to meet

with members of Sustainable Stanford to brainstorm project ideas and build relationships with staff and faculty mentors before the October 31st application deadline.



Stanford Energy Club Ready for Successful Second Year

Story Contributed by the Precourt Institute for Energy

Last fall, Stanford Energy Web merged with Energy Crossroads to form the new student-organized [Stanford Energy Club \(SEC\)](#), which strives to network Stanford students, scholars, and local professionals at all levels, regardless of discipline, who are interested in energy issues.



By the end of the academic year, more than 600 people had become members of the network, perhaps encouraged by SEC's guarantee of only one e-mail per week. The club's website compiles and lists energy events at Stanford and around the Bay Area, explains the many different energy research efforts at the university, allows members to connect through a searchable database, lists all energy-related courses at Stanford, and houses an energy job board. In addition, the club held biweekly energy socials during the academic year, collaborated on the Berkeley-Stanford Cleantech Conference, hosted the inaugural Stanford Energy Showcase and Energy 360 — a single event designed as a deep dive into a specific energy topic — and organized visits to local companies and facilities. The club expects to continue its phenomenal growth and expand its reach further in the 2011–2012 academic year.

Sustainability and Energy Management Partners with CEE to Test Solar Panels

Story Contributed by Heather Benz, Office of Sustainability Summer Associate

Stanford recently received a set of monocrystalline and polycrystalline photovoltaic solar panels from JA Solar. Wenny Ng, a 2011 graduate from the Civil and Environmental Engineering department, volunteered to test the panels' properties.

Following methods learned in classes taught by Gil Masters, Wenny exposed



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Sustainable Stanford at NSO

Starting with the resource fair during Residential Advisor training the week of September 12th, an open-invite presentation and event to conclude [New Graduate Student Orientation](#) on the afternoon of September 23rd, and the Engineering Student Services Fair on October 4th, Sustainable Stanford staffed tables throughout New Student Orientation. Staff distributed copies of the [Student's Guide to Sustainable Living at Stanford](#), as well as other resources specific to student life.

Energyfolks Email List Transitions to Web Portal

energy-folks.com, launched this September, is designed to empower the millions of students and professionals around the world interested in energy. Stanford Energy Club founders, Brentan Alexander, Anthony Suen, and Amit Desai, partnered with Stanford CEE Professor Emeritus Gil Masters to turn the 2500-user-strong “energyfolks” mailing list into a global information-sharing web portal. This platform will enable energy students and professionals around the world to experience events, discover careers and collaborate on research.



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the panels to varying levels of light and measured the panels’ output in amps and voltage. These measurements enabled her to draw a power curve for each panel, known as an I-V curve and compare it to the manufacturers’ specifications. She also tested the effects of shading and panel temperature on the efficiency of each panel. Wenny’s study will be used to determine how the Department of Sustainability and Energy Management will best make use of the panels.

Sustainability Outreach Coordinator Joins Office of Sustainability

Jemal Diamond will soon join Stanford’s Office of Sustainability as the Sustainability Outreach Coordinator. Jemal will work to advance awareness and implementation of campus-wide Sustainable Stanford programs (sustainable.stanford.edu). His portfolio will include publications, outreach campaigns, educational interfaces for the office’s programs and services, and green report cards for Stanford schools and departments.

Jemal comes to the Office of Sustainability from Stanford’s Residential & Dining Enterprises (R&DE), where he spent six years managing communications and campus outreach efforts, including developing and implementing their social media strategy. He was a key contributor to the application that led to Stanford Dining’s receipt of the Acterra Award for Business Sustainability, and oversaw the production of Stanford Dining and Stanford Hospitality’s first comprehensive sustainability report. Other highlights from his work at R&DE include outreach campaigns for Stanford Seafood Sustainability Week, 350 Climate Conscious Week, and the Love Food, Hate Waste program. Prior to working at Stanford, Jemal was the Instructional Resource Coordinator for The School of the Art Institute of Chicago, where he also earned his Masters in Fine Arts in Visual Communication.



Jemal’s office will be located within the Department of Sustainability and Energy Management on the first floor of 327 Bonair Siding. To contact Jemal, email jemal.diamond@stanford.edu.

Stanford's First High-Performance Building: A Retrospective

Story contributed by Heather Benz, Office of Sustainability Summer Associate

The [Leslie Shao-ming Sun Field Station](#) at Jasper Ridge Biological Preserve, Stanford's first high-performance building, was dedicated in June 2002. The station aimed to achieve net zero carbon emissions through a combination of aggressive energy efficiency techniques and a 22kW photovoltaic installation. Nine years later, the building is performing far better than standard campus buildings, but has not quite reached net zero status.



Philippe Cohen, Administrative Director, explained that the building's popularity has led to greater energy use than expected. Many campus groups use the building for retreats and workshops, and student researchers often work straight through the night at the field station.

In addition, complications with the prototype thin-film PV panels used on the roof led to lower solar production than anticipated. However, later this fall, several new inverters will be installed and are projected to increase solar panel output by 25-30 percent. These improvements, combined with expanded installation of LED fixtures,



should allow the building to achieve negative annual carbon emissions — better than net zero! As it enters its second decade of operation, the Leslie Shao-ming Sun Field Station will continue to serve as a model for high-performance design and construction at Stanford.

Stanford Showcases Programs at 2011 California Higher Education Sustainability Conference

Stanford University (SU) and Stanford Hospital & Clinics (SH&C) faculty and staff delivered numerous presentations highlighting innovative programs, sharing success stories, and reflecting on lessons learned at the 2011 California Higher Education Sustainability Conference (CHESC). The breadth of presentation topics demonstrated Stanford's comprehensive commitment to sustainability.

Annual CHESC participation continues to be an opportunity for campus sustainability staff to learn from other California colleges and institutions, share best practices, and benchmark Stanford's programs.

LED Fixtures Installed at Jasper Ridge Prove a Success

When managers of Jasper Ridge's [Leslie Shao-ming Sun Field Station](#) noticed that occupants often forgot to turn out lights, they decided to replace fluorescent fixtures with more efficient LEDs. To counter high upfront costs, the managers only installed LEDs in high-traffic areas.

A year after installation, residents express a strong preference for the LED light quality. The experience has been a positive one and the field station is now exploring the replacement of all its light fixtures with LEDs.

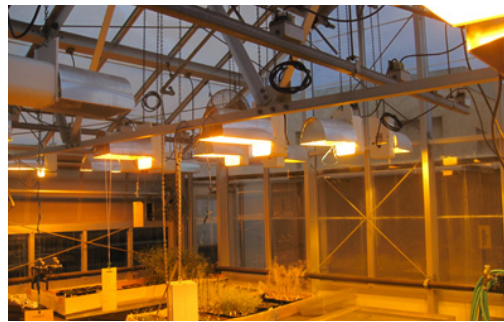
Third Bike Safety Repair Stand Goes Live

A new bike safety repair stand, located at the front entrance to 340 Bonair Siding, opened for business in June. The new stand, the third installed on campus, enables bicyclists to make minor repairs and pump up tires for free, making it more convenient for the campus community to maintain safe bicycles. Multiple tools are securely fastened to the rack, which also serves as a bike stand. For more information, and to find the other repair stand campus locations, visit the [bike safety repair stand website](#).

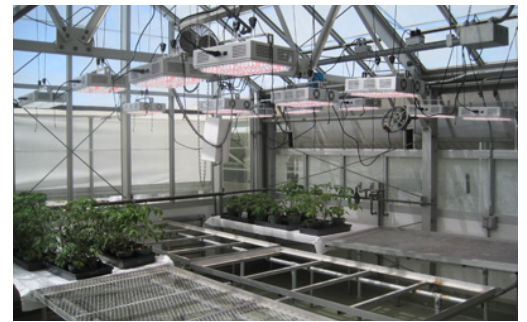
Stanford Improves Campus Greenhouses with LED Lighting

Story contributed by Bob Wheeler, Zone B Manager, Buildings and Grounds Maintenance

Stanford's Department of Biology often requires the use of greenhouses to support research. In these facilities, grow lights operate up to 18 hours each day. Until this summer, Stanford's greenhouses used high-pressure sodium lighting to meet this need with either 400- or 1,000-watt fixtures. Funded as a customized [Energy Retrofit Project](#), eight greenhouses have now been converted to LED fixtures that operate at a maximum of 168 watts and will save an estimated 248,000 kWh a year! LED fixtures also provide more uniform lighting, better control of light spectra delivered, and a lifecycle of 50,000 operational hours. Two additional phases of LED retrofits within other campus greenhouses are currently being coordinated with university researchers.



Lighting Before Retrofit



Lighting After Retrofit

Charging Stations Upgraded to Meet New Electric Vehicle Standards

Parking & Transportation Services (P&TS) will install a total of six new J1772 electric vehicle charging stations across campus. The new stations replace Avcon and SPI charging stations installed in 2003 that are not compatible with the newest generation of electric vehicles. Two new charging stations were installed in Parking Structure 5 in July, and two more are scheduled for installation in September at Stanford's Visitor Center and Tresidder Memorial Union. The chargers were provided through a Department of Energy grant to [ChargePoint America](#). New chargers have the SAE J1772 connector, the new standard adopted by automobile manufacturers and compatible with the Nissan Leaf, Chevy Volt, and upcoming models, such as the plug-in Prius. Payment for charging sessions can be made through the ChargePoint network, which accepts ChargePass Cards and contactless credit cards, or by phone using a standard credit card. Through the Transportation Demand Management program, P&TS continues to promote sustainable and alternative transportation to the entire Stanford community.



New CFL and Toner Cartridge Recycling Programs

Story contributed by Chris Craig, Environmental Health & Safety

Did you know that Stanford recycles CFLs and printer toner cartridges? Neither of these items should be thrown in the trash.

Here are the steps you can take to ensure proper disposal at Stanford:

Printer Toner Cartridges —

- If possible, alter your purchasing habits to buy toner cartridges that can be returned directly to the manufacturer for refurbishment.
- Stanford recently partnered with Staples to place toner collection bins in strategic campus locations. Collected toner cartridges are refurbished where possible and/or disassembled for plastic and metal recycling.
- It is also acceptable to place used toner cartridges in electronic waste buckets found across campus.



Compact Fluorescent Light Bulbs (CFLs) —

- Place spent bulbs in electronic waste buckets, either in bubble wrap or in boxes to prevent them from breaking.
- If a bulb breaks, ventilate the area, bag the bulb components, and place them in the electronic waste bins.
- Collected bulbs are disassembled and both the mercury and glass are recycled.

By participating in CFL and toner recycling, you can help reduce the volume of waste Stanford sends to the landfill and the university's environmental impact. To learn more about the CFL and toner programs, as well as to find bin locations near you, please visit electronicwaste.stanford.edu.

Reminder: Green Fund Applications Due October 31st, 2011

Applications for the Green Fund are due at the end of this month. The Green Fund provides grants for innovative student-driven projects designed to create a more sustainable campus. A total of \$30,000 per academic year is available. [Apply online today!](#)

Research Compliance Office Embraces *One Less, Save More*

In conjunction with the "One Less, Save More" campaign, the Research Compliance Office created a local Sustainability Committee, added various recycling bins in the office, posted reminders, and sent emails to staff about what they can do to help Stanford achieve a greener footprint. During the July 4th week, a Stanford mug was provided to each staff member and the use of disposable cups was eliminated department-wide.

