



GREEN SCHOOLS / GREEN CAMPUS UPDATE NEWSLETTER

Using Energy Efficiency to Strengthen Education



August/September 2008

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GREEN SCHOOLS/GREEN CAMPUS TEAM:

Merrilee Harrigan, Vice President of Education
Jo Tiffany, Director - California Education Programs
Renee Lafrenz, Project Manager
Jennifer Alvarez, Senior Program Associate
Emily Curley, Senior Program Associate
Peter Jenkins, Program Associate



ALLIANCE TO
SAVE ENERGY

Creating an Energy-Efficient World

WATT'S NEW

Green Campus Interns Sweep Student Energy Efficiency Awards

Three Green Campuses Awarded Best Practice Awards

The Green Campus End-of-Year Meeting, held in conjunction with the UC/CSU/CCC Sustainability Conference, was held in San Luis Obispo from July 31 – August 2 this year, and was followed by a Student Convergence on August 3.

Green Campus Interns were featured prominently in the 7th annual Sustainability Conference, as three campuses were presented with awards for Best Practices in Student Energy Efficiency

- **CSU Chico** was awarded for their residence hall energy competitions. By incorporating innovative real-time energy metering into the contest, interns at Chico are able to more accurately track results. Additionally, the **420 students** participating in the competitions each year are afforded instant feedback to encourage energy saving behaviors.
- **UC Berkeley** was awarded for their energy-focused academic courses. Over 7 semesters, the student-led Energy Decal course has given **165 students** a solid introduction to energy issues of the day. Their ER 199 course, “Applications of energy efficiency and conservation,” trains students to do building assessments around campus.
- **UC Santa Cruz** was awarded an Honorable Mention for their sustained CFL exchange campaign. Using Change-a-Light month - October 2007 - as a frame for their outreach, interns exchanged **3,225 CFLs** in just one month.

Supplemental to the Sustainability Conference, Alliance staff planned a Green Jobs Luncheon, featuring conference keynote speaker and President of the Apollo Alliance Jerome Ringo and PG&E Senior Program Manager Keith Reed. Facilitated by Alliance Senior Program Associate Renee Lafrenz, these individuals spoke directly to the student audience about current energy issues as well as professional opportunities in the energy efficiency field. Mr. Ringo supplied an insightful presentation about the value of working together with, rather at odds to, those companies or industries who may seem to be standing against energy efficiency and climate change solutions.

Green Campus End-of-Year Meeting

During the Green Campus End-of-Year meeting, interns from across the state met as a group to reflect on a complete school year of energy projects, to share their accomplishments, and to plan for next year. Interns were recognized for accomplishments in team management, financial excellence, innovative energy savings projects, and outstanding marketing efforts.

Green Campus interns attended a Climate Action Planning Panel with representatives Matt St. Clair (UC Office of the President); Marlene Nang (CSU Chancellor's Office); and Fahmida Ahmed (Stanford University). The speakers described their organizations' long-term climate initiatives, as well as the personal journey each took to reach their current profession. The panelists also spoke about skills and projects that would be most effective for the interns to focus on during this year and beyond.

The projects workshop wrapped up the End-of-Year meeting with a peer exchange on dining halls, auditing, and tabling.

The Student Convergence

Finally, the Student Convergence of the UC/CSU/CCC Sustainability Conference provided an opportunity for students from all campuses to come together, share best practices, and learn about opportunities for state-wide organizing. Alliance Green Campus staff and representatives presented four sessions.

- Morgan King presented an Audit Training session demonstrating the use of diagnostic tools.
- Jennifer Alvarez and Peter Jenkins facilitated a session entitled “*Setting the Stage for Energy Efficiency*” which highlighted Green Campus best practices and program successes.
- CSU San Bernardino intern, Ashley O’Neill, UC Berkeley intern, Kameron Kitajima, and Campus Lead, Stephen Miller presented best practices in communications in the “*Writing Effective Newsletters,*” session.
- Stanford Green Campus Interns presented a case study on Stanford Green Campus’s Lighting Efficiency Projects.

Green Schools Save Energy

California Schools Average 6.2% Energy Savings

Green Schools in California are finally finding out the fruits of their energy saving campaigns, as Utility Management Services unveils their final savings results.

Calculated from a baseline of the previous year, the data takes into account weather differences, changes in school usage, and additions of equipment or building expansion to try to isolate the Green Schools teams' contributions to energy savings.

According to the final data, **the Green Schools program as a whole reduced school electricity use by approximately 6.2%** compared to the previous year’s baseline, totaling **1,185,512 kWh**, almost **600 tons of carbon dioxide**, and **\$202,100 in energy savings**. First year schools reduced energy consumption by an average of 6.4%; second year schools an average of 6.2%; and graduated schools an average of 5.2%.

Mount Vernon Elementary School in San Bernardino Unified School District achieved the greatest percentage reduction in energy consumption, reducing energy use by **20.2%** compared to the previous year’s baseline. San Bernardino High School in San Bernardino USD achieved the greatest absolute energy savings, reducing energy use by **130,695 kWh** and **\$22,296**.

Second year schools in Alta Loma Unified School District also achieved significant energy savings, with an average **17.7% district-wide reduction** in annual energy use, representing **432,326 kWh** and **\$69,448** in energy savings, and **216 tons** in avoided CO2 emissions. These savings are not included in the Green Schools Program’s total energy savings calculations, however, as schools in the District completed major lighting retrofits and upgrades which contributed to higher-than-usual energy savings.

While Green Schools Program activities helped influence these changes, the retrofits required a significant financial investment by the District, and therefore cannot be fully attributed to Green Schools, which primarily achieves energy savings through behavior and operations changes.

Jasper Elementary School was the school with the highest percentage energy savings in Alta Loma Unified School District at **32.9%**. The abnormally large savings show what is possible when building occupants focused on conservation are combined with buildings that are retrofitted with efficient technologies.

A big thanks and congratulations to all the 2007-2008 participants of the Southern California Edison Green Schools Program, and to Southern California Edison and the ratepayers for their support.

GREEN SCHOOLS & GREEN CAMPUS INNOVATIONS

Green Schools & Campus CFL Exchanges Save over 3 Million kWh

Making School Brighter the Right Way

With the 2008-2009 school year on the horizon, Green Schools and Campus teams are preparing for another year of excellent energy efficiency implementation. August also brings one full year of CFL exchanges in the California programs to a close, and the results are outstanding.

Throughout the '07-'08 academic year to date since August 1, 2007, Green Campus has exchanged a total of **13,383 CFLs**.

Not to be outdone, the California Green Schools program rounded out the year having exchanged **25,123 CFLs** to date.

Combined, the **total 38,506 exchanged bulbs** account for annual energy savings of 3.095 million kilowatt hours, over \$430,000 in avoided energy costs, and over 1,548 metric tons of carbon dioxide emissions.

To put these numbers in perspective, the overall savings equate to the annual greenhouse gas emissions from 441 passenger vehicles or the carbon dioxide emissions from burning 12.6 rail cars' worth of coal.



Vista Murrieta Students Propose Aggressive Savings

Environmental Engineering Students Target 10% Savings

Environmental Engineering students at Vista Murrieta High School in Murrieta Valley Unified School

District have done their research and proposed an aggressive energy saving target for their school during the upcoming year – 10%!

Incorporating Green Schools activities into their cutting edge Environmental Engineering class, students undertook research projects that revealed some "illuminating" information about their school and district. In looking at the amount of money the district spends each year on electricity, students found that if each school in the Murrieta Valley Unified School District saved from 5% to 10% of their current energy costs, the cumulative amount would result in \$144,196 - \$288,293 in savings.

As the largest school in their district, Vista Murrieta consumes the most energy. In just one year, Vista Murrieta spent \$563,511 - over half a million dollars - on energy. Students also found out that California schools are facing budget cuts to the tune of \$4.3 billion for K-12 schools alone. They ascertained that any money saved on energy would help the district to provide valuable education and learning tools to students.

To achieve their 10% goal and return valuable dollars to their school, the student researchers are proposing actions that teachers and students can directly control, namely by:

- Using half-lighting in all classrooms, thereby avoiding overlighting while providing better learning environments;
- Sharing refrigerators to remove as many under- or non-utilized mini-refrigerators as possible;
- Using at least one "Smart Strip" per classroom to cut down on phantom loads and allow for the easy and complete shut down of electronics.

Students anticipate using "spot checks," awarding points to those teachers and staff who are carrying out positive energy-saving behaviors in conjunction with observations from administrators, facilities, and IT staff. These observations will be supplemented with actual energy data provided by the district energy manager, Mr. Jeff Boone.

Students have proposed that half of every dollar saved be returned by the district to the school. From this money, they hope to use ten percent to fund an incentive program to reward the students and teachers who have cooperated with The Green Team.

The Environmental Engineering students will also be presenting this innovative, student-led proposal to new Green Schools teams at the upcoming Green Schools Professional Development Workshop in Temecula, CA.

Berkeley and Stanford to Extend Rivalry to Energy Competitions

Intercollegiate Energy-Saving Battles Slated for Fall

Dorm energy competitions have been a main-stay of Green Campus core portfolio energy saving projects since the inception of the program, but Stanford and Berkeley are taking the competition to a new level. This fall, Green Campus Interns from Stanford University and UC Berkeley will take their rivalry off the sports field and into the residence halls. The two campuses will engage in "**The Big Save**" - a month-long, intercollegiate, savings competition slated to take place in residence halls this November. In addition to energy, water will also be a focus of this year's savings competition.

Green Campus Interns, campus leads, and stakeholders from each campus are collaborating to create a fair and feasible cross-campus competition. The means of measuring the use of electricity, water, possibly natural gas, and which buildings will be included in the competition will be a challenge, given the differences in metering technology and building types between the two schools.

Interns are busy coordinating logistics as well as advertising the competition as much as possible before launch. In addition to the intercollegiate competition, the dorm battles will be taking place between residence halls on both campuses as well. Green Campus interns at Stanford will be building on "Conservation Cup," an annual competition put on by Students for a Sustainable Stanford with support from Stanford Housing. The contest continues its tradition of pitting Stanford residences against each other in a battle to conserve the most water and electricity during winter quarter. At UC Berkeley, Green Campus interns will build on their "Berkeley Blackout Battles" energy competition which is also being extended to a two month competition within four residence halls during the same time frame.

The battle is sure to be intense. We will provide an update with the results in a few months!

SCHOOL & CAMPUS RESOURCES

PPL Environmental Education Grants

Funding for School Energy Projects

The Project Earth Environmental Education Grants program directs focus toward renewable energy projects and energy conservation projects to encourage action in schools located near PPL facilities.

Through these competitive grants, teachers can receive \$500 to \$5,000 in funding for school projects that focus on energy issues like renewable energy demonstrations, energy conservation and the greening of schools. Please note: Any amount up to \$5,000 may be requested, but an estimated budget must accompany the request.

Grant proposals for energy and environmental projects at schools located near PPL facilities will be accepted online beginning in April 2008. All applications must be received by October 15, 2008. Early submittals are encouraged. Winners will be announced in November 2008.

Apply for the 2008 PPL Project Earth Environmental Education Grants online by visiting [PPL Electric Utilities](#).

The Weather Channel's Forecast Earth Summit

Scholarships for High School Students

The Weather Channel's Forecast Earth Summit is a conference for select future environmental leaders held in Washington D.C., December 5-7, 2008. The Weather Channel will provide free trips to D.C. for 20 high school students who are passionate about the environment.

Participating students at the Forecast Earth Summit will engage in hands-on activities such as building and launching a boat made entirely of recycled materials and creating a public service announcement (PSA) that will air on The Weather Channel and online at weather.com.

For more information about the Forecast Earth Summit and to apply [visit the Summit's web page](#).

"Kilowatt Ours" to Be Broadcast Nationwide

Award Winning Film About Energy Solutions Hits the Airwaves Across America (including Washington, DC on 10/1 - WHUT at 9:00 pm)

Award-winning film Kilowatt Ours: A Plan to Re-Energize America is a timely, solutions-oriented look at one of America's most pressing environmental challenges: energy. Kilowatt Ours will be broadcast on numerous public television stations nationwide this fall. Times and dates will vary by station. To learn more, visit www.KilowattOurs.org, or contact your local station viewer services department to find out if there is a broadcast scheduled in your community.

In Kilowatt Ours, filmmaker Jeff Barrie offers hope as asks the question, "How can I make a difference?" In his journey Barrie explores the source of our electricity and the problems caused by energy production including mountain top removal, childhood asthma and global warming. Along the way he encounters individuals, businesses, organizations, and communities who are leading the way, using energy conservation, efficiency and renewable, green power all while saving money and the environment. This often amusing and always inspiring story shows, "You can easily make a difference and here's how!"