



GREEN SCHOOLS / GREEN CAMPUS UPDATE NEWSLETTER

Using Energy Efficiency to Strengthen Education



June/July 2008

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GREEN SCHOOLS/GREEN CAMPUS TEAM:

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Jo Tiffany, Director of California Education Programs
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ALLIANCE TO
SAVE ENERGY

Creating an Energy-Efficient World

WATT'S NEW

Rochester City Schools are going Green

Corporate donations given in support of Green Schools Program

Local companies in Rochester, New York have generously donated \$10,000 to the Rochester City School District in support of the Green Schools Program. The funds from the generous donors - Wendel Energy Services, IBC Energy, M/E Engineering, UGU/ Gasmark Energy, Stantec, and Day Automation - will go to the District in support of energy activities of Green Schools teachers and students, who have done great work learning about and saving energy in their schools.

As with all Green Schools programs, students work with school staff, engineers, and other professionals on strategies for conserving energy at home and in their school. Unique to Rochester, however, each school is responsible for quantifying their savings projects and reporting the results of their campaigns. At the end of the year, the school district returns a rebate of 50% of the savings achieved by the team at each school for use in further energy education.

Twenty-one Rochester schools operated "Green Teams" during the 2007-2008 school year and have realized energy cost totaling \$102,000 this year. The team at Wilson Foundation Academy, where the donation ceremony took place, achieved more than \$13,000 in cost avoidance and savings. The average amount returned to schools was \$3,495 which means that, on average, schools save 49,937 kWh and prevent 33 tons of CO₂ from reaching the atmosphere each.

Monroe High School saved the most energy, avoiding 147,877.3 kWh, 99 tons of CO₂, and \$20,363 by removing 11 small refrigerators, 7 microwaves, 1 kitchen cooler, and 12 coffee machines; turning off lights in the boys and girls gym; using daylighting in 90 classrooms; and turning off computer monitors every night.

Rochester students get a demo before the school's Design-a-Hybrid contest

Dr. James Lee, Associate Professor of Research Faculty, Golisano Institute for Sustainability at RIT, and representatives from General Motors gave a demonstration of Toyota's popular Prius hybrid for students. The demonstration served as a kick-off activity for the school's Design-a-Hybrid contest in which students designed their own hybrid vehicles. The designs were unveiled before Dr. Lee and GM officials on Friday, June 13 and prizes were awarded to the winning designers. The student-run Green Team at Edison High School sponsored the event.

Green Schools Program in D.C.

A warm welcome to the "Saving Energy in D.C. Schools" program.

The Alliance to Save Energy will launch its Green Schools Program in the fall with 15-18 schools in DC. The Saving Energy in DC Schools Program (SEDS), operated in partnership with the DC Energy Office, will involve 10 middle and high schools, and about 5-8 elementary schools. The District of Columbia Public Service Commission has approved funding for the SEDS Program in DC, under its Natural Gas Trust Fund.

A key feature of the program is the Student Energy Auditor Training program which will train middle and high school students to conduct energy audits of their schools and homes. A main goal of the DC program is to help students teach their parents and surrounding community members about energy efficiency, so the primary focus of the audit training will be to educate students about energy efficiency in the home, using schools as the demonstration laboratory.

DC Local Project Leaders have already witnessed enthusiasm in the 10 schools that have signed onto the program and look forward to recruiting additional public, charter, and private schools to carry out the Saving Energy in DC Schools program.

Environmental policy is a hot topic that has spread like wildfire around the country, and DC is at the forefront. The District has been aimed at becoming one of the most aggressively "green" cities in the country by requiring all private builders to also adhere to LEED building standards by 2012 and building the first ever LEED certified sports stadium. Now, Green Schools provides an opportunity for the younger generation to make a contribution to energy conservation and efficiency too.

GREEN SCHOOLS & GREEN CAMPUS INNOVATIONS

Green Campus Innovations

Greeks Go Green

Green Campus reached out to sororities for the first time as CSU Chico Interns conducted educational outreach and retrofits with 16 members of the Alpha Phi sorority. Interns gave a presentation on energy efficiency and provided each resident with an *Alpha Phi Sustainability Handbook*. The team walked through the building with residents to show them opportunities to save energy, such as controlling phantom loads, installing CFLs, and eliminating extra refrigerators and other redundant equipment. Interns distributed **86 CFLs**, which residents installed in private rooms and throughout the house.



Also this month, PG&E completed installation of *The Energy Detective* (TED™) real time energy monitor unit in the sorority house. Interns explained to the residents how to use TED to manage and reduce energy consumption. Next month, Interns will review PG&E utility data for the house and report any savings.

Partnership Summit

The Alliances own Senior Associate Renee Lafrenz gave a presentation on Green Campus to environmental leaders in attendance at the fifth National Environmental Partnership Summit in Baltimore. The summit was organized by the national Pollution Prevention Roundtable and was co-organized and sponsored by the following U.S. EPA Programs and Offices: the Office of Cross Media Programs; the National Environmental Performance and Toxics; the Office of Compliance; and the Office of Small Business Programs. The far reaching collaborative effort assembled environmental experts, managers, professionals and technical assistance providers from 49 states to showcase their environmental leadership in business and programs.

At the Summit, Alliance Vice President for Education, Merrilee Harrigan, was awarded the *Spirit of the Summit Award* for her contribution and dedication to energy efficiency education.

UC San Diego audits Price Center

The Green Campus interns at UC San Diego performed the first segment of the Price Center energy assessment. Price Center is a highly visible, multi-building central hub of campus, making it a great candidate for a high-profile assessment project. The interns began their largest assessment to date by measuring lighting and phantom loads and gauging behavioral energy use in meeting rooms and offices in Price Center. The assessments will span the original Price Center, excluding the bookstore. Green Campus plans to make their most integrative assessment yet by combining the elements of both office and dining assessments by looking individually at the energy and water usage of the food vendors in Price Center as well as the office and retail spaces.

The assessment is scheduled to be completed in late summer and will be accompanied by a presentation to Price Center occupants on their current energy consumption and reduction strategies. Due to the variety of appliances measured, there is sure to be a diverse array of options available to reduce energy consumption and increase efficiency.

Green Schools Innovations

Student Audit Recommendations Adopted as District-wide Policy

As a follow up to the October 2007 Student Energy Audit Training (SEAT) program at Sultana High School, the Sultana Student Energy Management Team was invited by Hesperia Unified School District Superintendent Mark McKinney to audit the district office and make a special presentation of their findings to Hesperia District staff during a May 8 staff meeting. After conducting the audit, students estimated that the district offices could save up to \$100,000 per year by implementing simple energy efficiency actions. Student recommendations included unplugging and/or decommissioning unused appliances such as TVs, DVD players, coffee makers, microwave ovens, and small refrigerators, as well as reducing the number of water coolers and using 1/3 lights throughout the district office.

Mr. McKinney stated that he plans to include the student recommendations for efficient behavior and operations in the district employee handbook for all district employees to see and abide by- a first for Green School and one we hope will be emulated by other districts.

Green Campus interns go to the head of the class!

Green Campus interns offer academic energy efficiency courses

At UC Berkeley, the student-coordinated Energy Decal course convened its final class for the semester. The course, in its seventh consecutive semester of Intern-led energy instruction, strives to educate students to have a better understanding of the different types of sources used to create energy, how much energy they consume, the consequences of the pollution that is released as a result, and how one can change his or her lifestyle to consume less. Students integrate what they've learned to formulate approaches for what they can do to foster more sustainable practices.

Meanwhile, students in the Building Sustainability at Cal courses presented their sustainability assessment plans for eight buildings across campus: University, Wurster, Birge/LeConte, HAAS, Stanley, Evans, Hearst Mining, and Valley Life Sciences Building. The Building Sustainability at Cal Program trains and utilizes students to help reduce the environmental footprint of buildings by educating building inhabitants and identifying structural and operational changes that can be made to the building, in addition to designing and implementing educational projects. As part of this project, students enrolled in the course conducted building inhabitant surveys which covered lighting, thermal comfort, electronic devices at staff and faculty desks, and general energy efficiency questions. Based on their findings, the students developed final projects in the form of a strategy to improve the efficiency and overall sustainability of the building based on their findings.

At Humboldt State University, Green Campus interns led the final class of their Green Campus Internship Course. The course engages students in energy efficiency activities around campus and provides them credit for the time they spend spreading energy awareness and saving energy. Students in the course presented their energy projects to classmates as well as Alliance staff and campus stakeholders including Professor Richard Hansis. Students received full credit for their outstanding work in learning about and doing important energy efficiency work. Two of the students were even hired this month as Green Campus Interns!

Some of the individual student projects included:

Water and energy conservation poster- The poster included a student's research on hot water consumption in the residence halls. As a result of the poster, Housing Management will print the poster and post it in the residential buildings during the fall semester.

Energy Education at local primary schools- Two students developed a presentation and 'energy wheel of fortune' game and presented it to 2nd and 5th graders at three elementary schools.

Redwood Bowl Stadium Lighting Proposal- A student worked with Green Campus Interns during spring semester to gather support data for a proposal to retrofit the Humboldt stadium's lighting.

SCHOOL & CAMPUS RESOURCES

Earth Science Photography Contest

Earth Science Beyond Your Front Door

The American Geological Institute is sponsoring a photography contest to celebrate Earth School Science Week 2008. The photography theme is: *Earth Science Beyond Your Front Door*. Whether you are a young person yourself or an adult who works with youngsters, you can lead an educational outdoor adventure. When was the last time you climbed a mountain? Hiked a trail? Visited a wetland? Earth Science is all around us, and the best way for young people to experience it is to get outside and look!

The winner will receive a prize of \$300, a copy of AGI's *Face of Earth* DVD, and his or her photograph will be used on the Earth Science Week Website.

The contest is open to United States residents of any age. All eligible submissions must be received electronically by 5 p.m. EST, Friday, October 17, 2008.

For more information, visit

<http://www.earthsciweek.org/contests/photography/index.html>



Antarctic University Expedition 2009

IPY Antarctic University Expedition: February 13-28, 2009

Join the *International Polar Year (IPY) Antarctic University Expedition 2009* on its ship-based field course. This expedition provides a wonderful opportunity to experience one of the most exceptional places on Earth. IPY will be using an interdisciplinary approach to examine the uniqueness of the Antarctic continent, its political, scientific and exploration history.

The International Polar Year is a two-year program of science, research and education focused on the Arctic and Antarctic regions. International researchers from universities, northern communities, and governments are working to advance our understanding of cultural, social, economic and health dimensions, as well as geophysical, climate and biological processes in polar regions.

For more information, visit www.ipy.org

