

# THE GREEN VINE



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## THE BATTLE TO SAVE WATER

By Janet Ortega

Fall quarter has been busy for the PowerSave Campus team at UC Irvine. Energy and water conservation projects are in full swing in the freshmen residential halls with both an energy and water competition slated to wrap up in the next week. Team Manager Janet Ortega has been focusing on the Water Battle in Middle Earth, a competition between the buildings to reduce their water consumption. To raise awareness in the dorms, presentations were given to residential advisors in the early stages of the competition to explain the rules and prizes for their residents. By following live updates through the Facebook and Aquacue dashboard pages, residents are eligible to win individual prizes, and the winning residence hall will have \$1,000 donated to the charity of their choice through UCI Housing.

Throughout the competition, Janet and PowerSave volunteers have been tabling by the dining commons to spread the word. This is a great opportunity to inform students about water conservation and get them pumped for the competition! Residents have been incredibly supportive of the competition and that enthusiasm is apparent through the reduction in their water consumption. This is likely influenced by the fact that residents can check their hall's progress in real-time by checking the Aquacue dashboard listing building water consumption online. This handy device also gives residents the gallons of water a person in their hall uses a day. There are only a few days left of the competition and the progress is great! Janet hopes that students learn how easy is it to conserve water and keep these habits beyond the competition dates.

Expect updates on the final results and winners in next month's newsletter!

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# PSC TECHNOLOGY BLAST

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(Excerpt from the Alliance to Save Energy)



Next time you go watch a game at your school's stadium look up to notice the bright light shining through the stadium lamps. Typically, lamps on sports stadiums are equipped with metal halide lamps which produce light by an electric arc through a gaseous mixture of vaporized mercury and metal halides. Metal halide lamps need ballasts to start the lamp, regulate the current provided to the lamp, and ensure consistent light output. However, ballasts are not 100 percent efficient—energy losses always exist between the power input to the ballast and the power output to the lamp. This energy loss is wasted energy since it is not being converted to light, and the losses can be very large—on the order of 10–30 percent, depending on the wattage of the lamp.

To help minimize this problem, the United States Department of Energy has proposed a new set of strong energy efficiency standards which would help to reduce energy loss and save money, and would be a step toward meeting President Obama's goal of reducing carbon dioxide (CO<sub>2</sub>) greenhouse gas emissions by 3 billion metric tons by 2030 through efficiency standards. The new efficiency standards would improve the efficiency of the ballasts that are used to drive metal halide lamps. Typical metal halide ballasts are magnetic ballasts, which consist of metal coils wrapped around a magnetic core. The efficiency of magnetic ballasts can be improved by using higher grade core steel, using copper wiring in place of aluminum wiring, and adding steel laminations. Even bigger efficiency gains can be achieved by switching from magnetic ballasts to electronic ballasts. Instead of using a core and coil, electronic ballasts use electronic circuitry.

Here is a **project idea** with potentially large energy savings for your campus: **Why not discover more details about the metal halide lighting in your school's sports field?** See if you can find out what type of ballast technology is used by the lamps. If the metal halide ballasts are magnetic (as most typical metal halide ballasts are), could they be improved by using higher grade core steel, using copper wiring in place of aluminum wiring, and adding steel laminations? What about switching from magnetic ballasts to electronic ballasts? **The amount of energy and money that could be saved by your campus just by improving the metal halide light technology of field lamps could be huge!**

To learn more about **metal halide lamps** check out these links:

[Edison Tech Center: Metal Halide Lamps](#)

[How To Calculate Lighting Costs For Metal Halide Fixtures](#)

To read about the **Department of Energy's new metal halide lamp fixture standards** click the links below:

[Energy Conservation Standards for Metal Halide Lamp Fixtures](#)

[The Great Energy Challenge: Metal Halide Lights](#)

*-Written by Danny Soto (Alliance to Save Energy intern at the statewide program's Oakland office)*





# ACADEMIC INFUSION

By Brij Patel

Throughout the fall, intern Brij Patel has been reaching out to professors to collaborate on an academic project to infuse energy efficiency concepts into the classroom. The proposed project, which could vary in style and length, would consist of students taking a pre-survey where their existing knowledge of these concepts will be tested. At the conclusion of the project, whether it is an assignment, presentation, or other medium, they will gain more knowledge about the program and will know certain facts about energy efficiency. They will then take a post-survey to evaluate the extent of their newfound knowledge.

After many weeks of searching, Brij is in communications with the professor of one of the classes offered at UCI called "Sustainability 50" to pursue this initiative. Based on preliminary discussions, students will use iClickers to answer questions on energy efficiency and when they are finished, the professor will give us the recording of the students' responses. This not only helps the campus more aware of what's going on but since it's a classroom learning environment it is extremely useful for the students who are taking this class to learn more about sustainability. It may be facts that they might carry on for multiple years. After the class is done we will be comparing the post survey results to those of the pre survey, helping us understand how much they have learned from this program and what impacts our efforts have had on their attitudes and lifestyles when it comes to energy efficiency.



[Student sustainability involvement groups at UC Irvine!](#)

[\(Click link above\)](#)



Credits for the photo belongs to <http://www.studentlife.uci.edu/newstudent/>



October Metrics:

- 42 survey responses
- 392,000 kWh saved (YTD)

**Contact Us:**  
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# JOB OPPORTUNITY

## With UCI PowerSave Campus

The Alliance to Save Energy's PowerSave Campus Program seeks 1-2 enthusiastic environmental advocates for the position of PowerSave Campus Program Intern at UC Irvine starting immediately and through the 2013-2014 academic year. The intern position demands an organized, self-starter who is familiar with the UCI campus community and is comfortable working on a team.

The intern will determine his/her specific objectives and workload through ongoing consultation with team-members, and under the supervision of Alliance Program staff.

**Applicants must:**

- Be currently enrolled graduate or undergraduate students.
- Possess excellent written and oral communications skills; be an organized, self starter, and have excellent time management skills.
- Be comfortable with the basic functions of Microsoft Word, PowerPoint, and Excel.
- Have leadership and teamwork experience.

The position is slated for approximately 7-15 hours per week, compensated at \$11 dollars per hour. The start date of the position is somewhat flexible, though immediately and during fall 2013 is preferred. Candidates who are interested in a year-long position (or longer) will be favored.

To apply, please copy and paste the below link into your internet browser. After filling out the information requested, please be prepared to also upload a PDF file that includes your resume and cover letter:  
<https://home2.eease.adp.com/recruit/?id=9290232>

Applications will be reviewed upon receipt until the positions are filled, with noon, Friday, November 22, 2013 as the final deadline. Position is open until filled.

**Quote of the newsletter:**  
**“Never doubt that a small group of thoughtful committed citizens can change the world; indeed, it is the only thing that ever has.”**  
 –Margaret Mead

