Southern California Edison

Energy Management Success Story



University of California, Irvine



UC Irvine: Continuing Education for Energy Management Success

"Energy efficiency and conservation have always been and will continue to be an integral part of our operation," say Paul S. Wingco, Campus Energy Manager, and Paul Howland, Director, Plant Operations at the University of California, Irvine. "We have a cohesive community of faculty, staff and students supporting that effort, and we're collaborating with Southern California Edison (SCE) and with our SCE Account Manager toward achieving some ambitious energy management goals."

Founded in 1965, UC Irvine has blossomed into one of the nation's most respected research universities, earning renown in the health sciences and interdisciplinary research. Meanwhile, the Irvine area has surged as a business and population hub. "We're in the midst of a building boom, and we're experiencing huge growth in the size of the community," says Howland, "so efficiency and conservation of energy are more important than ever. We invest constantly in energy-conserving technology that will pay us back in savings as quickly as possible."

Small Steps to Measurable Savings

UCI's 1,245-acre campus undergoes continual improvement to accommodate its ever-changing research programs and growing student population. "We try to squeeze the most out of every kWh," says Wingco. "It's a constant challenge." "We're always looking for better ideas, and SCE is an essential partner," Howland continues. "We take advantage of all the energy-management programs we can, including incentive programs, large or small."

UCI's successful participation in SCE's **Customized Solutions Program makes** the point: recent projects include replacing outmoded lighting with more efficient T5, T8, and compact fluorescent lighting (CFLs); upgrading traffic signals with energy efficient LED lamps; installing occupancy sensors to turn off lights when classrooms or lecture halls are not in use; installing window film to reduce radiant heat gain in buildings; and optimizing air-conditioning and heating systems by installing variable speed drives on pump and fan motors. The savings add up: in 2005, measures like these saved UCI over 3.4 million kWh.

Estimated Savings by Managing Energy

- Location: Irvine, CA
- Industry: Schools/Universities
- SCE Programs Utilized: Customized Solutions, Savings by Design,
- *Results:* savings of 3.3 million kWh, plus an additional 1.5 million kWh saved through UC/CSU/IOU Energy Efficiency Partnership

estimated energy savings **4.8** million kWh

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Evolving Needs, Improving Designs

"Our campus environment is dynamic, so buildings are constantly evolving to reflect and support these changes," says Wingco. "We collaborate with SCE through its Savings By Design Program in designing new facilities and in adapting older ones. Our lab buildings can be heavy electricity users, so we need to plan every possible efficiency in as early in the process as we can."

Howland concurs. "We're committed to energy efficiency exceeding the standards in California's Title 24 by 20%," he says. "Savings By Design means that we maintain high energysaving standards even while a building program evolves."

Think. Act. Save.

"Think. Act. Save." That call to action appears on posters and T-shirts around the UCI campus as a reminder of the University's determined energy management goals: the University of California as a whole aims to procure 20% of its electricity needs from renewable sources by 2017, and to use energy-efficiency retrofit projects to reduce system wide growth by 10% by 2014 from a year 2000 base — all while expanding both its research programs and student population. "Those are aggressive targets," say Wingco and Howland, "but the UCI community is committed to sustainability. Our collaboration with SCE will help us make it a reality."



Paul Howland, Director, Plant Operations and Paul S. Wingco, Campus Energy Manager, University of California, Irvine



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- Energy Efficiency Partnerships offers support to local governments and institutions to assist them in achieving a joint vision of sustainability
 www.sce.com/partnerships
- Save more with SCE's Demand Response Programs, such as Critical Peak Pricing and Demand Bidding Program, which offer low cost ways to reduce your electrical bill for agreeing to temporarily reduce electricity usage during peak hours.
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