

THE LIGHTING LINK

NEWS FROM CLTC AND ITS PARTNERS

California Lighting Technology Center is a part of the University of California, Davis and the Energy Efficiency Center.

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CLTC affiliates and partners get ready for the Smart Grid

CLTC is partnering with affiliates, Sacramento State University, and Lawrence Berkeley National Laboratory (LBNL), to demonstrate controls and lighting technologies that will be compatible with the Smart Grid, a monitoring system that uses sensors and communications tools to save energy and increase electricity grid reliability. When Smart Grid systems are ready for deployment, the system will provide customers with opportunities to reduce their energy consumption by examining data about their real-time energy use. Lighting retrofits will be one of the best opportunities for quick reduction.

Sacramento State founded the California Smart Grid Center in 2008 to research new technologies and help utilities make changes to the current grid. The university currently is helping the Sacramento Municipal Utility District (SMUD) develop and update its Smart Grid strategy, which is expected to be completed in 2012. CLTC is partnering with the Smart Grid Center to install lighting demonstrations in the Center and to contribute lighting expertise to the effort.

CLTC and the PIER Demand Response Research Center at LBNL are preparing to begin work on a test bed to investigate the technical potential of several commercial lighting systems using an open source tool kit. This project is expected to begin in early 2011.

CLTC affiliates are preparing for Demand Response and Smart Grid deployment by developing technologies that will respond to utility signals – delivered using OpenADR – and adjust lighting and plug loads appropriately. For example, Lutron is developing both residential and commercial systems that network lighting and appliances so facility managers or homeowners can schedule their use around peak pricing periods or respond to demand response events. A display of Lutron technologies that can be paired to perform these tasks is on display at CLTC. Lutron also recently announced it is participating in an Automated Demand Response Small Commercial Pilot Program conducted by Lawrence Berkeley National Lab and Pacific Gas & Electric Company.

[Click here to visit the California Smart Grid Center's website.](#)

[Click here to visit the PIER Demand Response Research Center's website.](#)

[Click here to download Lutron's AutoDR press release.](#)



Demonstrations update: Bi-level induction shoebox fixtures demonstrated at two sites

CLTC recently installed demonstrations of bi-level induction shoebox fixtures at the California Department of Public Health in Richmond, CA, and the University of California, San Francisco. The CDPH retrofit, which replaced eight 175 W metal halide fixtures with 100 W bi-level induction fixtures, resulted in \$18,496 total lifecycle cost savings for this demonstration site. The UCSF retrofit, which replaced 150 W high pressure sodium shoebox fixtures with 35 100 W bi-level induction shoebox fixtures, resulted in \$47,845 total lifecycle cost savings.

[Click here to download the case study.](#)



Exterior Lighting Guide offers advice to facilities managers

The Exterior Lighting Guide for Federal Agencies is now available to assist National Park facilities managers and others who are planning a retrofit or new design of an exterior space. The guide offers tips on how to save the most energy and money through lighting design; how to improve light in a space; how to pay for a project; how to conduct a lighting audit; and what emerging technologies have to offer.

[Click here to download the 2010 Exterior Lighting Guide for Federal Agencies.](#)

Siminovitch helps plan Thailand lighting center

Michael Siminovitch, CLTC director and UC Davis professor, traveled to Thailand for several weeks in August and September to help coordinate a new lighting center at King Mongkut's University of Technology Thonburi (KMUTT).

Siminovitch met with the president and vice president of KMUTT to plan a sustainable lighting center in collaboration with the university's architecture and engineering schools. The center first will focus on a campus relighting effort with the potential to save 30% in lighting energy over the next five years.

Conferences and events

CLTC participated in the Governors' Global Climate Summit 3 on Nov. 14–16 at UC Davis. A tour of CLTC's facility was given; three posters were presented at an Environmental and Energy Showcase reception; and CLTC energy-efficient lighting technologies were displayed at the Global Pavilion.

Michael Siminovitch and Konstantinos Papamichael participated in panel discussions at the Emerging Technologies Summit 2010 in Sacramento on the topics of "New Commercial Lighting Options" and "New Residential HVAC and Lighting Technologies."

Luis Lomelino Fernandes and Kelly Cunningham gave poster presentations at the Illuminating Engineering Society (IES) Summit in Toronto, Canada. They presented on a "Lighting Control User Interface Standards Project" and "Simple Tools for Sky Photometrics."