

Lighting the Future

The PIER Demonstrations program is a model for change through technology development and commercialization.

THE CALIFORNIA LIGHTING TECHNOLOGY Center's (CLTC) mission is to stimulate, facilitate, and accelerate the development and commercialization of energy-efficient lighting and daylighting technologies. This is accomplished through technology development and demonstrations, as well as outreach and education activities in partnership with utilities, lighting manufacturers, end users, builders, designers, researchers, academics, and government agencies.

CLTC's 16,000-square-foot research facility functions as a living laboratory for the development

and demonstration of emerging lighting and daylighting technologies, providing luminary leadership for the future of energy-efficient lighting.

PIER DEMONSTRATIONS

Products and best practices that have the greatest potential to reduce the energy used for lighting are tested in real-world environments through the PIER State Partnership for Energy Efficiency Demonstrations program. CLTC installs and monitors lighting technologies at various California universities, cities and municipalities, government agencies, state and federal military divisions, and

large commercial end user sites. The goal of the program is to promote energy-efficient building technologies by bringing environmentally safe, affordable, and reliable energy services and products to the marketplace.

**MORE THAN 2,900 INSTALLATIONS
AT OVER 100 SITES**

**SAVINGS OF OVER 4.6 MILLION KWH
AND 3.9 MILLION POUNDS OF CO₂**

\$600,000 TOTAL ENERGY COST SAVINGS

Research & Development



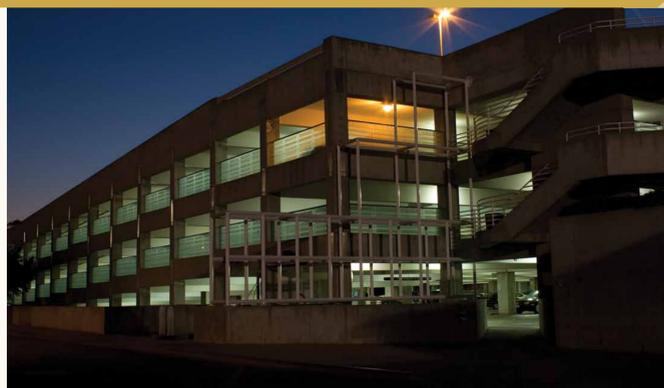
Market-driven with industry partners.

The CLTC research facility includes full-scale lighting, daylighting, and photometric testing laboratories for the development and demonstration of next-generation, emerging lighting and daylighting technologies. Projects range from developing entire systems to converting existing fixtures from one source to another.



CLTC's laboratory includes state-of-the-art testing equipment, like the integrating sphere (left). A high reflective interior surface measures a luminaire's luminance. An integrating sphere with timed climate control is a new addition to CLTC's equipment.

Demonstration & Outreach



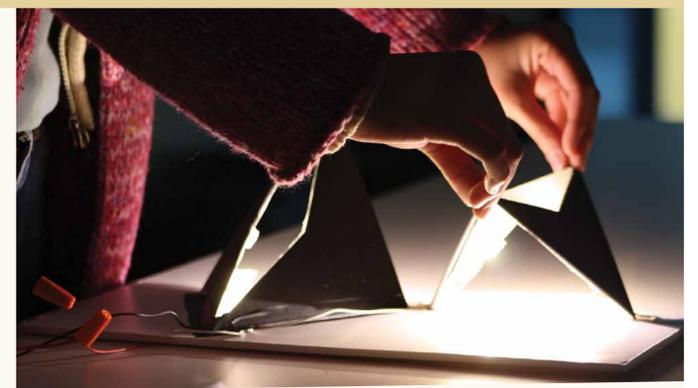
Field testing and feedback from end users and utilities.

CLTC has installed lighting technologies at more than 100 demonstration sites to analyze energy-efficient lighting products on college campuses and in government buildings throughout California. The demonstrations, sponsored by the PIER Program, have saved California more than 4.6 million kWh and 3.9 million pounds of carbon emissions — an estimated \$600,000 in total energy cost savings.



The Smart Lighting Initiative uses efficient lights and sensors to reduce lighting when facilities are vacant. A parking structure near the Mondavi Center features this technology. Once installed in all parking structures the initiative could save 1.3 million kWh annually.

Education & Training



Preparing the workforce of today and tomorrow.

Students and professionals form connections with research and industry leaders through classes, seminars, and forums that CLTC leads throughout the year. Undergraduate lighting courses are offered at CLTC through the University of California, Davis, where students learn hands-on about lighting and daylighting technologies.



Undergraduate students in Professor Michael Siminovich's Lighting Design course work at the intersection of energy-efficiency technology and sustainable design. Every year, students compete to design and develop the best prototypes for fully functional light emitting diode (LED) luminaires.

FOR MORE INFORMATION ABOUT:

PIER lighting demonstrations:

www.pierpartnershipdemonstrations.com

www.terradex.com/PublicPages/CIEE/PIER_01.aspx

California Lighting Technology Center:

cltc.davis.edu