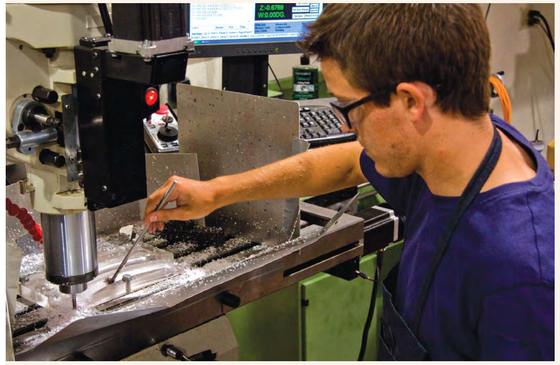
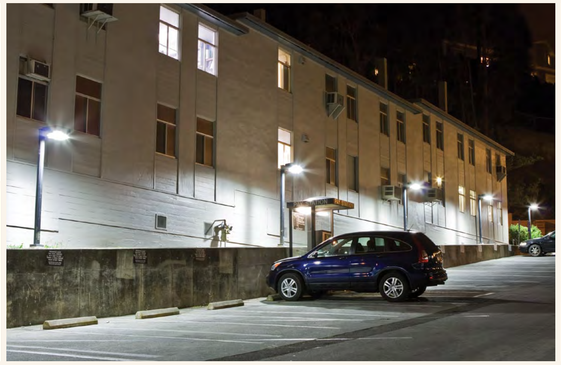
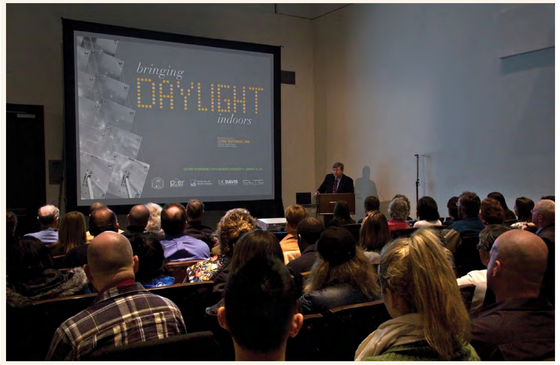
# PIER STATE PARTNERSHIP FOR ENERGY EFFICIENT DEMONSTRATIONS

A MODEL FOR CHANGE THROUGH ENERGY-EFFICIENT LIGHTING TECHNOLOGY DEVELOPMENT & COMMERCIALIZATION

**RESEARCH & DEVELOPMENT** | **DEMONSTRATION & OUTREACH** | **EDUCATION & TRAINING**








## Market-driven with industry partners.

The California Institute for Energy and Environment (CIEE) developed and manages the PIER State Partnership for Energy Efficient Demonstrations (SPEED) Program in partnership with the California Lighting Technology Center (CLTC). CLTC's mission is to stimulate, facilitate, and accelerate the development and commercialization of energy-efficient lighting and daylighting technologies. CLTC accomplishes these goals through partnerships with universities, utilities, lighting manufacturers, end users, builders, designers, researchers, and government agencies.

Lighting technologies that CLTC recently developed and/or tested:

- Dual-Loop Photosensor Control System for Daylight Harvesting
- Energy-Efficient LED Downlights
- Smart HID Wall Packs
- Smart Induction and LED Parking Garage Luminaires
- Smart Street and Parking Area Luminaires
- Wireless Integrated Photosensor and Motion Sensor system

## Field testing and feedback from end users and utilities.

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 SPEED Program. CLTC installs and monitors lighting technologies at various California universities, cities and municipalities, government agencies, state and federal military divisions, and large commercial 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.

Products introduced to market in 2010:

- Lithonia Archway
- Adura Wireless Control System
- Philips Capri Downlight
- Solatube 750 DS Daylighting System
- Self-Commissioning Dual-Loop Photosensor Dimming Control System

## Preparing the workforce of today and tomorrow.

PIER SPEED demonstration outreach efforts include a family of websites, speakers and displays at key industry conferences, papers and articles for industry publications, tours of energy facilities, and events hosted and attended by PIER demonstrations team members. In addition, students and professionals form connections with research and industry leaders through classes, seminars, and forums that CLTC leads throughout the year. CLTC also develops and produces many publications to guide and instruct end users about lighting technologies and codes.

Recent publications:

- Case studies and technical briefs on lighting technologies
- Title 24 Residential Lighting Design Guide
- Bear Valley Visitor Center Lighting Retrofit Guide for National Parks
- Exterior Lighting Guide for Federal Agencies
- Adaptive Exterior Lighting Guide
- 2010 Lighting Technology Overview

## RESULTS OF THE PIER/SPEED DEMONSTRATIONS PROGRAM AT CLTC

- The demonstrated technologies eventually could reduce annual California energy use by at least 2 billion kWh.
- Many technologies developed at CLTC with PIER funding now are widely available on the market.
- Utilities use program performance data as leverage to include demonstrated lighting products in their own Emerging Technology and incentive programs.
- The program has influenced California Energy Commission-developed codes and standards.
- The demonstrations program has prompted many new manufacturers to enter the market with derivatives of demonstrated products.
- Broader audiences now are aware of strategies and product options that previously were not available.
- Successful new companies have created jobs and investment opportunities.
- Beyond California, CLTC has influenced nationwide groups and energy-efficiency standards such as NYSERDA; the City of Anchorage, Alaska; ENERGY STAR; and ASHRAE 90.1.

**More than 2,900 installations at over 100 sites**

**Savings of over 4.6 million kWh and 3.9 million pounds of $CO_2$**

**More than $600,000 total energy cost savings**

## FOR MORE INFORMATION ABOUT PIER LIGHTING DEMONSTRATIONS:

**www.pierpartnershipdemonstrations.org**
**www.terradex.com/PublicPages/CIEE/PIER_01.aspx**

### DEMONSTRATION PARTNERSHIPS

The PIER SPEED Program is looking for demonstration sites for energy-efficient lighting technologies. A low-risk, high-reward commitment, this innovative program positions participants on the leading edge of energy-efficiency research as proving grounds for products that are preparing to enter the marketplace. Are you interested in participating in our program? Please contact us to discuss the available technologies.

**KARL JOHNSON**
SPEED Research Coordinator
karl.johnson@uc-ciee.org
www.uc-ciee.org

**DAVID WEIGHTMAN**
PIER Program Manager
dweightm@energy.state.ca.us
www.energy.ca.gov/research

**CORI JACKSON**
CLTC Program Director
cmjackson@ucdavis.edu
cltc.ucdavis.edu