



SOUTHERN CALIFORNIA
EDISON[®]

6040 N. Irwindale Ave., Bldg. A
Irwindale, CA 91702

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– www.sce.com

Energy-Related Learning

– www.sce.com/ctac
– www.sce.com/agtac

Statewide Transmission System Status

– www.caiso.com

Utility Regulation

– www.cpuc.ca.gov
– www.energy.ca.gov

SOUTHERN CALIFORNIA EDISON

POWER BULLETIN

COMMERCIAL SEGMENT

VOL. 11 No. 1 January 2011

Save Energy and Money With New SCE Learning Opportunities

The New Year brings a number of new learning opportunities at Southern California Edison's (SCE) Energy Centers to help you develop and implement energy management solutions that improve your bottom line.

In addition to its many existing free classes on lighting, HVAC, motors, refrigeration and other key energy topics, in 2011 Edison's Energy Center in Irwindale, the Customer Technology Application Center, introduces the following new free courses:

2008 Nonresidential Standards Essentials for Energy Consultants:

Feb. 10, Event No. 27246

This intermediate-level seminar for energy consultants will explore the nonresidential building energy standards and the importance of staying up-to-date to effectively communicate energy efficiency compliance options and requirements to clients. Attendees will learn to identify key nonresidential building energy efficiency standards and compliance issues for new construction, alterations and additions; recognize the purpose of compliance-related documents; communicate compliance options and requirements to builders and clients; and apply knowledge of the standards to typical job tasks. This seminar provides seven AIA/HSW Learning Units.

California Advanced Lighting Controls Training Program Five-Day Workshop:

March 7, 8, 9, 10 and 11 (all from 8 a.m. to 7 p.m.), Event No. 27810

The California Advanced Lighting Controls Training Program (CALCTP) is a statewide initiative aimed at increasing the use of lighting controls in commercial buildings. CALCTP will educate, train and certify general electricians in the proper design, installation and commissioning of advanced lighting control systems, which typically include dimmers, occupancy sensors, photo-sensors, relay modules and communication-based control devices. The course will include a combination of lectures and hands-on lab sessions (attendees should bring basic tools) and conclude with a final exam.

For CALCTP enrollment, participants must be state-certified electricians and provide a certificate of completion for the Lighting Controls Association online program before beginning the CALCTP course. Mandatory prerequisites are EE101: Introduction to Lighting Controls, EE102: Switching Controls, EE103: Fluorescent Dimming and EE201: Daylight Harvesting. Find these courses at www.aboutlightingcontrols.org/Education_Express/accr_orgs.php

Industrial Lighting Applications: March 24, Event No. 27016

This advanced-level workshop geared toward architects, engineers and designers will serve as a practical guide to designing energy-efficient lighting for industrial facilities. Attendees will receive an overview of industrial environments' special lighting requirements as well as an examination of design standards, energy and safety issues, controls and state-of-the-art equipment. Design charrettes will showcase solutions to specific industrial lighting challenges. Prerequisites for this workshop include The Lighting Design Process and its prerequisites. This workshop provides seven AIA/HSW Learning Units.

For more information about how SCE's Energy Centers in Irwindale and Tulare can help you make smart energy choices, to review the complete list of course offerings (including those held offsite) and to register for a class, log onto www.sce.com/energycenters.

Visit World Ag Expo for Energy Solutions From SCE

SCE will showcase a variety of energy management programs and services at the upcoming World Ag Expo—the world's largest agricultural exposition, taking place Feb. 8-10 in Tulare.

Stop by the SCE exhibits—spaces 6138-40 in the Dairy Center and booth L40 on North Greenbelt—to learn more about SCE's energy efficiency, Demand Response, solar and other programs that can help improve your bottom line. You also can view free pump tests and hybrid fleet truck demos, plus receive updated information about the new Smart Meter technology and plug-in vehicles.

In addition, SCE customers who bring a recent electric bill to SCE's booth area will receive a free gift (one per customer, while supplies last).

During the World Ag Expo, SCE's Energy Center, the Agricultural Technology Application Center (AGTAC), will offer the following free seminars/workshops:

- **Feb. 8, 11 a.m.-12 p.m.: Pump Efficiency:** Learn practical issues and choices available for efficient pumping systems and pumping efficiency maintenance. Dairy Center Booth 6138-40.
- **Feb. 8, 12 p.m.-1 p.m.: Solar Energy Panel Discussion:** Find out more about SCE's programs and solutions to harvest the sun's power and reap the savings. Dairy Center Booth 6138-40.
- **Feb. 10, 9 a.m.-10 a.m.: Integrated Energy Solutions:** Learn how to make the most of the kilowatts you use through SCE's energy efficiency and Demand Response programs, which can help you earn financial incentives and other benefits. Booth L40 North Greenbelt.
- **Feb. 10, 10 a.m.-11 a.m.: Smart Meter and the Smart Grid:** Explore SCE's leading Smart Meter and Smart Grid strategy and advancement efforts. Booth L40 North Greenbelt.
- **Feb. 10, 11 a.m.-12 p.m.: Electrical Safety:** Learn about electrical safety for agricultural workers through safety demonstrations, tips and practices. Booth L40 North Greenbelt.

If you're at the World Ag Expo, also visit SCE's AGTAC, located directly across the street. This state-of-the-art educational resource center showcases technologies through interactive exhibits, demonstrations and classes to help customers save energy, money and the environment.

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AgTAC classes and tours are free. For more information, visit www.sce.com/energycenters. Details on the World Ag Expo are available at www.worldagexpo.com, and the showgrounds map is located at www.worldagexpo.com/General-Info/Showground-Maps.htm.

COMMERCIAL SEGMENT FOCUS

Office Building Complex Pumps Up Energy Savings With Auto-DR

The largest commercial property in the Santa Monica area, The Water Garden provides a premier business environment for its tenants. Its 17-acre campus includes eight office towers, with a lake, six fountains and tree-canopied paths that create a true urban oasis.

This outdoor beauty exists hand-in-hand with a strong commitment to conservation. A long-time proponent of energy efficiency, in early 2010 The Water Garden complex earned a U.S. Green Building Council Leadership in Energy and Environmental Design (LEED)[®] Gold Certification for Existing Buildings in recognition of its green building features.

As part of its ongoing effort to save energy, money and the environment, The Water Garden, through property management firm CB Richard Ellis, used SCE's Technical Assistance and Technology Incentives Program in 2009 for a site assessment to identify Demand Response potential. Based on the results, in 2010 The Water Garden joined SCE's Automated Demand Response (Auto-DR) program.

Auto-DR as Part of the Energy Solution

Auto-DR allows customers with an automated load control system, such as energy management (EMS) or Supervisory Control and Data Acquisition (SCADA) systems, to participate in SCE's Demand Response programs with no manual intervention, providing flexibility and ease of use. Customers pre-select their level of participation and earn incentives for peak-period energy load reductions, which help ensure adequate electricity supplies and also offer environmental benefits.

SCE provides incentives of up to \$300 per kilowatt (kW) of tested load reduction for system upgrades and technologies that allow Auto-DR. The Water Garden's incentive totaled approximately \$46,500, which facility General Manager Christa Duggan said "paid for virtually the entire energy management system."

The Water Garden uses Auto-DR to participate on the Critical Peak Pricing (CPP) rate schedule, which rewards customers for reducing or shifting electricity usage during nine to 15 summer critical peak events, when the demand for and price of electricity climb.

During a CPP event, a central system sends a signal to The Water Garden's EMS to automatically turn off the pumps that feed the site's water features. This allows The Water Garden to take part in Demand Response events, given its limited options to reduce or shift load inside the buildings during peak-period times without affecting tenants. The Water Garden retains the ability to override the automated signals and change its load reduction strategies at any time.

In its first summer participating on CPP using Auto-DR, The Water Garden saved \$4,770 on its electric bills, and can drop as much as 140 kW per CPP event.

"It's a 'no-brainer,'" Duggan said. "It's transparent to tenants and doesn't impact their work productivity."

Chief Engineer Willie Weddle said the EMS system that allows for use of Auto-DR also provides the advantage of scheduling pump system operations from one location, instead of from six separate pump rooms located throughout the complex.

"Before we worked with six different time clocks, which were hard to synchronize," Weddle said. "Now we can instantly go to a computer screen and make changes to the pump schedules. With a couple of mouse clicks we can accommodate a change."

Weddle added that the automated system makes it as easy as possible to reduce load during critical times. "We get an automatic e-mail the day before a CPP event is scheduled, and we don't have to do anything else."



In its first summer participating on the Critical Peak Pricing rate schedule using Automated Demand Response, The Water Garden office complex saved more than \$4,700 on its electric bills.

Annual Energy Efficiency Savings of \$400,000-Plus

In the decade prior to implementing Auto-DR, The Water Garden took significant steps to lessen its energy usage, including:

- Retrofitting more than 8,600 garage fixtures (32-watt T8 lamps to 25-watt T8 lamps) and about 230 equipment room light fixtures (T12s to T8s);
- Replacing 440 stairwell light fixtures with occupancy sensors and 15-watt pilot lights;
- Installing variable speed drives on the cooling towers, HVAC fans and chillers at the complex; and
- Implementing an "on-demand" program that allows tenants to request air conditioning on Saturdays, but otherwise not running it on that day.

Weddle said these measures and many others saved The Water Garden more than 2.7 million kilowatt-hours annually over the 10-year period, for annual savings of \$400,000-plus.

The Water Garden also received more than \$280,000 in SCE rebates and incentives for installing qualifying high-efficiency equipment.

"It's a corporate responsibility to our community to be more efficient," Duggan said of The Water Garden's long-term commitment to energy savings. "It also lowers our operating expenses, with savings passed through to tenants."

Duggan said that once higher levels of Demand Response incentives became available, it made sense to take that next step beyond energy efficiency. The Water Garden's SCE account executive (Damon Hannaman), Duggan added, "always comes up with great ideas and looks for ways for us to reduce load and get incentives."

For more information on how you also can benefit from Auto-DR and SCE's wide array of energy management programs and services, contact your account representative or visit www.sce.com/autodr, www.sce.com/drp and www.sce.com/solutions.