

## Industry Partners Meeting is a big success

### CEE celebrates 15th anniversary

CEE's third annual Industry Partners Meeting continues to grow – in attendance, interest and relationship building. At a post-meeting reception, Board Chair Gene Rodrigues toasted CEE's 15th anniversary, acknowledging the organization's growth, accomplishments and ever-expanding partnerships (see page 16).

The meeting, held last month in Dallas, drew more than 60 industry representatives, who met with CEE members to discuss areas of mutual interest. Ten trade associations were represented and more than 70 CEE members attended, including several members of the Board.

Although segments of the meeting addressed general topics, such as the basics of energy efficiency programs and EAct 2005, a large majority of the sessions focused on specific



program opportunities with industries (lighting, HVAC, commercial kitchens, water heating and water/wastewater).

Phil Austen of Long Island Power Authority found the networking opportunities to be extremely helpful. "It is great to have the ability to place a face with the name of someone you

**Continued on page 14**

## Stakeholders express support for single QI specification

The quality installation specification developed by the Air Conditioning Contractors of America (ACCA) is nearing completion.



This specification, developed with input from CEE staff and several CEE members, defines a set of minimum requirements for an energy-efficient installation of unitary (residential and small commercial) HVAC equipment.

The technical installation requirements laid out in the final draft received a ringing endorsement from a diverse group of stakeholders at CEE's Industry Partners Meeting last month. The public commenting period concluded on Oct. 22; new input is being considered and the

specification is expected to be finalized.

"CEE's members and EPA have had a strong voice in development of the ACCA specification," said CEE Program Manager John Taylor, who is coordinating CEE's involvement in the specification development process. "We're hopeful the outcome will be useful to both local and national voluntary energy-efficiency programs."

A well-attended breakout session at the Industry Partners Meeting included seven equipment manufacturers, CEE members, representatives from ACCA, the Air Conditioning and Refrigeration Institute (ARI), and other interested stakeholders.

Attendees supported the use of the ACCA specification as a basis for the 2007 ENERGY STAR® quality installation specification.

**Continued on page 4**

### WHAT'S INSIDE

Gas water heating . . . . .	2
Calendar . . . . .	3
NATE HVAC Efficiency Analyst exam . . . . .	4
ENERGY STAR installation pilot . . . . .	4
New residential HVAC specification . . . . .	5
<i>Lighting for Tomorrow</i> . . . . .	6
LEDs for residential lighting . . . . .	7
Consumer electronics . . . . .	7
Working with Industry . . . . .	8-9

EAct update . . . . .	10
Commercial HVAC specification revision . . . . .	10
Commercial kitchens . . . . .	11
Water/wastewater . . . . .	12
Pump optimization . . . . .	12
Water/wastewater facility benchmarking . . . . .	13
Commercial lighting . . . . .	13
Plug-in hybrid automobiles . . . . .	14
CEE News Briefs . . . . .	16

# Water heating: members, manufacturers find common objectives

During two well-attended breakout sessions at the Industry Partners Meeting, water-heater manufacturers and efficiency program representatives identified several key barriers to advancing more-efficient water heating.

"The sessions provided a valuable exchange of information," said Stephanie Jones, CEE Gas Program Manager. "Manufacturers learned about the different types of programs and our members were able to hear the concerns of industry."



In addition, two important accomplishments emerged from the sessions:

- Manufacturers gained a better understanding of the need for shipment data by efficiency program administrators.
- Energy-efficiency program administrators learned about the constraints of the mandated efficiency metrics for different types of gas water heaters.

## Information exchange

Representatives from three major water-heater manufacturers (A.O. Smith, Noritz and Rinnai) attended the sessions, and manufacturers and efficiency program representatives quickly found common ground on the importance of sharing information.

Manufacturers want to know which programs are co-promoting their efficient products and found CEE's 2006 Gas Water-Heating Program Summary to be very helpful. CEE plans to update the program summary annually and will seek input from manufacturers on possible enhancements.

Meeting participants also made headway on the importance of product shipment data for efficiency programs. In the past, water-heater manufacturers have been reluctant to share shipment data, even when this information is aggregated to ensure confidentiality.

At this session, efficiency program administrators explained how important shipment data can be for establishing baseline levels of efficiency to help in planning programs and justifying the use of public funds.

"We agreed that GAMA (Gas Appliance Manufacturers Association) could collect and share that data," said Bill Hoover, Chief Engineer for A.O. Smith. "We're supportive of anything that would lead to greater sales of energy-efficient water heaters."

## Comparing efficient products

Manufacturers identified another critical barrier by detailing the limits they face in promoting high-efficiency tank-type equipment. Federal regulations specify the efficiency metric manufacturers must use for testing and advertising. Units that are designated "residential" because of their size (less than 75,000 Btu/hr heat input) are rated with Energy

## Gas DSM Summit held in Dallas Nov. 6-7

As part of its increased emphasis on gas programs, CEE hosted a Gas DSM Summit on Monday and Tuesday, Nov. 6-7, at the Adam's Mark Hotel in Dallas.

This meeting focused on the needs of CEE members running gas-efficiency programs. Attendees developed a vision for the future of gas efficiency and identified concrete actions required to achieve this vision.

Among the 30 attendees were representatives from 20 CEE member organizations, which included 15 gas utilities. NW Natural (Portland, Ore.) and Union Gas (Ontario) also participated.

Information about this workshop will be posted on the CEE Web site ([www.cee1.org](http://www.cee1.org)). For further details, contact CEE Program Manager Stephanie Jones at [sjones@cee1.org](mailto:sjones@cee1.org) or 617-589-3949, ext. 202.

Factor (EF), while larger "commercial" units use Thermal Efficiency.

Most condensing units are designated "commercial" because of their high heat input, but can be used in residential applications. Because these larger units do not have an EF rating, however, consumers have trouble understanding that they are efficient, especially if their local efficiency program defines high-efficiency water heating with EF.

CEE will work with manufacturers to see if there is a way to help consumers understand the efficiency of condensing units. "They are inherently more efficient," said Hoover, "and could save the average homeowner up to \$100/year in fuel costs."

Condensing units have been a highly popular product in commercial buildings for the past 10 years, according to Hoover. "CEE could help educate consumers about the difference [between thermal efficiency and energy factor]," he said. "A neutral third party could address the confusion and make comparisons between tankless, standard units and condensing heaters."

## Initiative exploration

The meeting was also an opportunity for many of CEE's members to explain to manufacturers how they currently promote efficient gas water heating. Their programs vary significantly; some promote tankless systems, some promote traditional tank-type heating and others promote both technologies.

"The overall goal for CEE in its exploration of a gas water-heating initiative is to look for barriers that can be addressed in a common way across efficiency programs," said Jones. "The ways our members currently approach efficient water heating differ greatly. A common approach would reduce confusion in the marketplace and leverage local program efforts for a North American impact."

In addition to exploring opportunities for increased commonality across programs, CEE will work closely with GAMA on the exchange of product shipment data. The Gas Committee will also identify ways to address the confusion between Energy Factor and Thermal Efficiency.

# UPCOMING EVENTS

Date	Event	Contact
Nov. 6-7	CEE's Gas DSM Summit DALLAS	617-589-3949, ext. 202 <a href="http://www.cee1.org">www.cee1.org</a>
Jan. 17-19, 2007	CEE Program and Board of Directors Meetings LONG BEACH, CALIFORNIA	617-589-3949, ext. 206 <a href="http://www.cee1.org">www.cee1.org</a>
Jan. 29-Feb. 1	AESP National Energy Services Conference LAS VEGAS	480-704-5900 <a href="http://www.aesp.org">www.aesp.org</a>
March 20-21	ACEEE-CEE National Symposium on Market Transformation WASHINGTON, D.C.	302-292-3966 <a href="http://www.aceee.org">www.aceee.org</a>
June 13-15	CEE Program and Board of Directors Meetings BOSTON	617-589-3949, ext. 206 <a href="http://www.cee1.org">www.cee1.org</a>
July 24-27	ACEEE Summer Study on Energy Efficiency in Industry WHITE PLAINS, NEW YORK	302-292-3966 <a href="http://www.aceee.org">www.aceee.org</a>

## Winter meeting moves to Long Beach Jan. 17-18

Because members have indicated that December is a busy month, CEE has moved its winter meeting to January in Long Beach, Calif.



Several recent winter meetings have been held in San Francisco and the switch to southern California is an effort to balance the travel requirements for all of our West Coast members.

The meeting will be held Wednesday and Thursday, January 17-18.

The Board of Directors Meeting will follow on January 19.

Meetings will be held at:

**Hilton Long Beach**  
701 West Ocean Blvd.  
Long Beach, Calif.  
562-983-3400

The discounted room rate is \$149 per night. Additional information is available on the CEE Web site ([www.cee1.org](http://www.cee1.org)).

\* \* \*

**The ACEEE-CEE National Symposium** on Market Transformation is scheduled for Tuesday and Wednesday, **March 20-21**, at the Omni Shoreham Hotel in Washington, D.C.

\* \* \*

**CEE's summer Program Meeting and Board of Directors Meeting** will be held **June 13-15** at the Hyatt Harborside in Boston. Additional information will be posted on the CEE Web site when it becomes available.

### CEE NEWSLETTER, FALL 2006 EDITION

©2006 Consortium for Energy Efficiency, Inc.

All rights reserved.

The CEE Newsletter is published quarterly by the Consortium for Energy Efficiency as a means for distributing energy-efficiency news to CEE members and other interested stakeholders. Material in this newsletter may not be reprinted without written permission from CEE.

Comments, story ideas, news items and calendar listings should be sent to CEE Communications Director Howard Newman at [hnewman@cee1.org](mailto:hnewman@cee1.org).

## CEE PERSONNEL

98 North Washington Street  
Suite 101  
Boston, MA 02114-1918  
Phone: 617-589-3949  
Fax: 617-589-3948

**EXECUTIVE DIRECTOR**  
Marc G. Hoffman, ext. 210  
[mhoffman@cee1.org](mailto:mhoffman@cee1.org)

**DEPUTY DIRECTOR**  
Ed Wisniewski, ext. 201  
[ewisniewski@cee1.org](mailto:ewisniewski@cee1.org)

**OFFICE MANAGER**  
Laura May, ext. 200  
[lmay@cee1.org](mailto:lmay@cee1.org)

**COMMUNICATIONS**  
Howard Newman, ext. 209  
[hnewman@cee1.org](mailto:hnewman@cee1.org)

### PROGRAM STAFF

#### INDUSTRIAL PROGRAMS

Ted Jones, ext. 230  
[tjones@cee1.org](mailto:tjones@cee1.org)

Ilene Mason, ext. 225  
[imason@cee1.org](mailto:imason@cee1.org)

Jenny Harvey, ext. 226  
[jharvey@cee1.org](mailto:jharvey@cee1.org)

#### RESIDENTIAL PROGRAMS

Rebecca Foster, ext. 207  
[rfoster@cee1.org](mailto:rfoster@cee1.org)

John Taylor, ext. 228  
[jtaylor@cee1.org](mailto:jtaylor@cee1.org)

Erica Schroeder, ext. 231  
[eschroeder@cee1.org](mailto:eschroeder@cee1.org)

Eileen Eaton, ext. 203  
[eeaton@cee1.org](mailto:eeaton@cee1.org)

#### COMMERCIAL PROGRAMS

Denise Rouleau, ext. 224  
[drouleau@cee1.org](mailto:drouleau@cee1.org)

Afroz Khan, ext. 208  
[akhan@cee1.org](mailto:akhan@cee1.org)

Susan Loucks, ext. 205  
[sloucks@cee1.org](mailto:sloucks@cee1.org)

#### GAS/MULTIFAMILY PROGRAMS

Stephanie Jones, ext. 202  
[sjones@cee1.org](mailto:sjones@cee1.org)

#### EVALUATION/RESEARCH

Monica Nevius, ext. 227  
[mnevius@cee1.org](mailto:mnevius@cee1.org)

#### PROGRAM SERVICES

Rachael Swain, ext. 206  
[rswain@cee1.org](mailto:rswain@cee1.org)

# NATE completes beta version of energy-efficiency exam

North American Technician Excellence (NATE) has completed development of the beta version of the highly-anticipated *HVAC Efficiency Analyst* Exam.



installation practices that would save energy and reduce peak demand. CEE has been involved throughout the development of this exam to ensure it aligned with CEE member efforts to promote quality HVAC installations.

"The *HVAC Efficiency Analyst* senior certification validates the experienced technician's knowledge of load calculation, equipment selection, air distribution, hydronic distribution, system perform-

ance, indoor air-environment quality and maintenance," said Pat Murphy, NATE Vice President of Certifications. "Unlike other NATE tests, this senior test requires the candidate to hold two NATE service certifications." The HVAC-EA requirements are available on the NATE Web site ([www.NATEX.org](http://www.NATEX.org)).

To access the Efficiency Analyst requirements on the Web, click on **Continued on next page**

## Stakeholders express support for QI specification

**Continued from page 1**

"Most attendees agreed on the potential value the ENERGY STAR brand could bring to the residential HVAC installation market," Taylor said. "An ENERGY STAR installation could be an excellent selling point for contractors. If and when ENERGY STAR launches a QI program, it will be extremely important to have major market stakeholders on board with the underlying definition."

Julie Humes, Marketing Manager of Lennox Industries, noted that "the brand recognition of ENERGY STAR is valuable to us, but it's important that ENERGY STAR address equipment and installations separately."

There was strong consensus at the session regarding Humes's point and attendees acknowledged that communicating an "ENERGY STAR Quality Installation" must be done carefully and explicitly.

"It is critical that there is no confusion between ENERGY STAR-qualified HVAC equipment and an ENERGY STAR installation," said Dick Lord of Carrier Corporation.

ENERGY STAR is currently testing the installation concept in the Pacific Gas & Electric service territory, making use of the ACCA specification as its basis (see story at right). EPA staff members have indicated that an ENERGY STAR Quality Installation program (that will likely require a local program sponsor) is expected to be launched in 2007.

ACCA believes the specification is a comprehensive document that provides minimum requirements for virtually every aspect of HVAC installation. Attendees at the breakout session agreed that most contractors do not currently verify all the requirements in the specification.

"We understand that consistently meeting this specification will be a challenge for industry," Taylor said. "Based on CEE member field studies and input from contractors serving on the ACCA QI Committee, the average installation is well below what is required in the ACCA spec. If contractors, manufacturers, distributors, ENERGY STAR and our members get behind it, however, the specification could achieve widespread acceptance. When that happens, the energy savings and peak demand reduction should be substantial."

According to a 1999 ACEEE study, a quality installation

"could save an average of 24 percent of energy use in existing homes and 35 percent in new construction."

CEE will keep members informed about the progress of the ACCA specification and its potential adoption by ENERGY STAR. The hope is that an ENERGY STAR installation program will be ready for use in CEE member programs at the outset of the 2007 summer cooling season.

For further information about the ACCA specification or if you would like to be involved in developing comments for EPA about the ENERGY STAR QI Program, contact John Taylor at [jtaylor@cee1.org](mailto:jtaylor@cee1.org) or 617-589-3949, ext. 228.

## ENERGY STAR pilot should provide insights

In theory, ACCA's specification for a quality installation of HVAC equipment makes perfect sense. Do the job right, the customer is happy and the contractor provides a valuable service.

But how will it work in the real world? Is it worth the extra time and effort for contractors? Will customers understand and appreciate the difference? How important is ENERGY STAR's endorsement of quality installation?

To answer these questions, ENERGY STAR is conducting a pilot study in the Pacific Gas & Electric service territory. About 100 PG&E customers are having HVAC installations done according to the requirements set forth in the ACCA specification. They are being told that contractors are installing their system to meet ENERGY STAR guidelines and will receive an ENERGY STAR certificate after the work has been verified.

All work is being verified by an independent third party and approximately one-quarter of the installations will have follow-up inspections. ENERGY STAR marketing materials are used to explain and market the concept (and benefits) of a quality installation.

"Our goal is to get feedback on the ACCA specification and overall program design," said Dale Hoffmeyer of EPA. "We're doing this pilot to learn as much as we can about the ACCA specification before putting forth a proposal for an ENERGY STAR quality installation program. We'll also learn about the effectiveness of the ENERGY STAR marketing materials."

Feedback will be provided to ENERGY STAR by the contractors performing the work. In addition, PG&E will survey customers to determine satisfaction with the job and understanding of quality installation. ENERGY STAR's goal is to launch a quality installation program in 2007.

# Residential HVAC Committee developing new 'Advanced Tier'

CEE is in the process of revising its "Advanced Tier" for residential central air conditioning, with the goal of an official adoption by the Board of Directors in early 2007.

Currently, CEE's highest tier for this equipment, Tier 2, has performance requirements of 15 SEER, 12.5 EER for split systems and 14 SEER, 12 EER for packaged equipment. These split system requirements have been in effect since 1995. CEE member rebate data and national model availability information suggest that a new Advanced Tier for split systems is feasible.

The proposed Advanced Tier for residential central air conditioners would require minimum levels of 16 SEER and 13 EER. The formal industry commenting period ended Oct. 18, but initial input was sought at the CEE Industry Partners meeting.

The specification, when finalized and approved, will be used as a basis for qualifying equipment in the CEE Directory of ARI-Verified HVAC Equipment.

"Our goal in developing this new tier is to identify and enable promotion of the most-efficient products available and also send a unified market signal defining equipment performance CEE members value," said CEE Residential Program Manager John Taylor.

"Our research indicates that equipment meeting the proposed Advanced Tier requirements is already produced by several manufacturers and can be cost-effective with the aid of financial incentives."

CEE's HVAC Committee recognizes that equipment with this level of efficiency

## NATE energy-efficiency exam

Continued from page 4

"Information/Forms/Data" on the home page, then "KATEs" on the left navigation bar.

NATE anticipates that approximately 50 beta tests need to be administered before the certification development can be completed. While technicians who pass the beta version will be certified as Efficiency Analysts by NATE (if they hold the prerequisites), the test will be fine-tuned over time.

"CEE members now have a credible technician certification that focuses on energy efficiency and can be integrated



doesn't have significant market penetration yet, but many CEE members want to provide incentive for consumers considering a purchase of the most efficient equipment available today.

Manufacturer input is critical in developing a robust specification. While manufacturers acknowledged CEE's concern with peak demand reduction, they said that efficiency ratings during the hottest days (e.g., EER at 95 degrees Fahrenheit) are approaching theoretical limits, so other options – such as equipment enabled for demand response and load control – should also be explored.

Jim Crawford of Trane noted that technologies allowing SEER to increase may not be accompanied by increases in EER. The cost of installing some load control devices, however, is likely to be much less than the cost of utilities adding new power generation.

Manufacturers also suggested that it was important to ensure that any CEE specification have qualifying systems available at a range of capacities. The Air-Conditioning and Refrigeration Institute made a commitment to provide CEE with national model availability data at different equipment sizes.

CEE's Commercial HVAC Committee is also revising its advanced specification (page 10) and will be working with

the Residential HVAC Committee to harmonize the two specifications when appropriate. Although a complete alignment is not feasible at this time (and may not be appropriate given the differences in the markets for this equipment), it will receive ongoing consideration.

## Heat pumps

The Residential HVAC Committee is also developing a new Advanced Tier for air-source heat pumps. This process is more complex, however, because previous industry feedback has indicated that a tradeoff exists between the heating performance and cooling performance of this equipment.

Model availability data also suggest that the heat pump with the "most efficient" heating performance is not the same as the heat pump with the "most efficient" cooling performance (with the exception of some 2.5-ton "trophy" models). Therefore, CEE's HVAC Committee is exploring the creation of two different heat pump specifications for heating-dominated and cooling-dominated climates.

"While we recognize a single, national advanced specification for heat pumps would be ideal, the committee believes the trade-off in performance and the effect climate has on performance require a serious look at regional specifications for heat pumps," explained Taylor.

CEE will be working closely with industry to ensure any future regional specifications are based on the best available data and complement manufacturers' efforts to cater to different segments of the market.

into their existing HVAC programs." said John Taylor, CEE's HVAC Program Manager. "With energy costs on the minds of most North Americans, we expect HVAC technicians will increasingly want to differentiate themselves as energy-efficiency experts."

CEE members interested in promoting the *HVAC Efficiency Analyst* Exam by offering the beta test to technicians in their service territory should contact Kathy Corr of NATE at [Kcorr@natex.org](mailto:Kcorr@natex.org) (703-600-0358) or John Taylor at CEE: [jtaylor@cee1.org](mailto:jtaylor@cee1.org) or 617-589-3949, ext 228.

# Lighting for Tomorrow 2006: more designs, more winners

The fourth annual *Lighting for Tomorrow* fixture design competition was bigger and better than ever. A total of 12 manufacturers, including six newcomers, were honored at the American Lighting Association (ALA) Annual Conference in Las Vegas on Sept. 12. A solid-state lighting competition also made its debut this year, with the judging in Davis, Calif., on Oct. 11 (see story below).

*Lighting for Tomorrow* is managed by CEE, ALA and the Department of Energy (represented by Pacific Northwest National Laboratory). Twenty-six CEE members combined to pledge more than \$150,000 to sponsor this year's competition.

A total of 26 attractive energy-efficient fixture families are being promoted through the *Lighting for Tomorrow* 2006 Yearbook. This 63-page book includes color photos, CEE and ENERGY STAR® program information, technology updates and other useful information for consumers, retailers and builders.

The yearbook will be used as a means to reward manufacturers for their investment in energy efficiency as well as educate builders and retailers about the feasibility – and more importantly, availability – of ENERGY STAR fixtures.

"The yearbook will have a wide range of uses," explained Rebecca Foster, CEE Residential Program Manager. "For program administrators, it's a tool that can promote their local efforts. The lighting industry can use the yearbook as a marketing resource to stimulate sales.

"Builders and designers can also use the catalog to choose a wide array of energy-efficient products. The fixture families selected to appear in the Yearbook emphasize style, efficiency and compatibility with a range of interior design requirements."

About 10,000 copies of the Yearbook will be distributed to retailers and builders nationwide.

Nearly 60 fixture families, about double the number of entries into the 2005 competition, had been submitted. Manufacturers were required to submit designs of fixture families rather than



**IN AND OUT** – Winners in the *Lighting for Tomorrow* 2006 competition included indoor finalists San Miguel (Good Earth Lighting), top left, and Olympia (Kichler Lighting), top right; and outdoor finalists Fairview (Progress Lighting), above left, and Craftson (Lithonia Lighting), above right.

single products. Fixture families are lighting products that complement each other – aesthetically and technically – and can be purchased as a set for the home. There were separate categories for indoor and outdoor fixture families, providing builders and consumers with better options for choosing energy-efficient lighting.

Designs were evaluated by a panel of judges comprising lighting professionals and retailers, journalists, homebuilders and energy-efficiency program administrators. Awards were presented on the basis of attractiveness, value,

marketability, innovation and functionality. ENERGY STAR qualification was required for all winners.

With five finalists each, Lithonia Lighting and American Fluorescent produced the most winning designs for fixture families.

Justice Design Group (three), Dolan Designs (three) and Deancoins Company (two) were the other multiple winners.

For a list and color photos of all winners, see the *Lighting for Tomorrow* Web site ([www.lightingfortomorrow.com](http://www.lightingfortomorrow.com)).

## Solid-State Lighting competition judging completed

The judging for the *Lighting for Tomorrow* Solid-State Lighting Competition took place Oct. 11 at the California Lighting Technology Center (CLTC) in Davis, Calif. Of the 28 entries scored by the judging panel, the largest fixture category was under-cabinet with a total of 12 entries. The remaining fixtures included two in-cabinet, four portable desk/task, seven outdoor/path lighting and three recessed/ceiling mounted.

Six lighting experts, including Terry McGowan of the American Lighting Association and Michael Siminovitch of the CLTC, made up the judging panel. The judges scored the fixtures according to five different criteria: application efficiency, overall lighting quality (including color quality, amount of light provided, glare and distribution), thermal design, luminaire aesthetic appearance and innovation.

After scoring, comparing and discussing each fixture, the judges selected several to be recognized by *Lighting for Tomorrow*. These fixtures will be tested by the CLTC to verify their energy efficiency. Winners will be announced in December.

## CEE tracks suitability of LEDs for residential, commercial programs

Light-emitting diodes (LEDs) are one type of solid-state lighting that has been the focus of much efficiency industry attention over the past few years. According to DOE forecasts, LEDs have the potential to save large amounts of electricity compared to incandescent – and even fluorescent – light sources.



**Given their directional nature, LEDs may offer advantages to traditional light sources in certain applications.**

While this has created excitement in many circles, LED technology has yet to prove itself – through performance or cost-effectiveness – in traditional lighting applications. Since many groups (from the energy-efficiency community and the lighting industry) are exploring the use of LEDs, CEE devoted a breakout session at the Industry Partners Meeting to solid-state lighting.

At the session, participants discussed some promising applications for the solid-state lighting as well as the hurdles that must be overcome before widespread adoption can take place.

“LEDs are inherently directional,” said Marc Ledbetter, Program Manager for Pacific Northwest National Laboratory. “In a lot of applications, that’s an advantage because you have less light loss.”

Applications include those where the light source isn’t too far from a work surface and where durability and longevity of the light source are benefits. Possible applications mentioned at the meeting include under-cabinet or in-cabinet lighting, elevator lighting, refrigerated display case lighting, outdoor step and pathway lighting, and task lighting.

Although these promising applications exist for solid-state lighting, there are some hurdles to the adoption of this technology in the near term. These hurdles include a lack of standardized test procedures to measure lifetime, color,

efficacy and other key performance attributes. Other barriers include a fixture manufacturing industry with limited technical expertise about solid-state lighting and varying assumptions among efficiency program implementers about when this light source will become competitive with existing products. CEE is addressing each of these hurdles as part of its residential lighting work.

CEE is monitoring efforts by the American National Standards Institute (ANSI), the Illuminating Engineering Society of North America (IESNA) and others to develop industry standards and test procedures for LEDs. Final procedures for the key standards and test procedures mentioned above are expected as early as May 2007.

Through its *Lighting for Tomorrow* design competition, CEE and organizing sponsors – the American Lighting Association and DOE (represented by Pacific Northwest National Laboratory) – are educating manufacturers and designers about the early applications for LEDs and rewarding products that make the best use of the light source (see page 6).

In order to exchange information about member program planning and develop common assumptions about solid-state lighting, CEE has created a monthly forum where CEE members, manufacturers and lighting experts can create a comprehensive vision for residential lighting efficiency.

“It’s important to view solid-state lighting in a larger perspective,” said CEE Residential Program Manager Rebecca Foster. “We need to understand the objectives of program administrators and manufacturers, and learn more about the technical aspects of LEDs if we are going to successfully transition to this new light source.”

Participants at the Industry Partners Meeting supported such a step; they agreed that a coordinated approach to the future of residential lighting efficiency is needed.

CEE will be facilitating the monthly meetings via conference call. If you are interested in participating or learning more about CEE’s work in residential lighting, contact Rebecca Foster at [rfoster@cee1.org](mailto:rfoster@cee1.org) or 617-589-3949, ext. 207.

## CEE committee explores the fast-paced consumer electronics sector

The consumer electronics industry is highly competitive and rapidly changing. Technologies that are wildly popular one day can be outmoded the next.

Coupled with this is the fact that energy performance is not high on the list of consumer purchasing criteria. CEE’s Electronics Exploratory Committee, formed just four months ago, is examining potential roles for CEE to encourage efficiency in this key end-use area.

Consumer electronics currently account for about 10-15 percent of

a household’s total energy consumption, according to ENERGY STAR®, and this amount is increasing.

“We probably need a non-traditional approach because everything changes so quickly in consumer electronics,” said CEE Program Associate Erica Schroeder, who is leading CEE’s efforts in this area.

“Our typical specification approach,



**DOUG JOHNSON**  
CEA

where it can take 6-12 months to fully identify and vet the appropriateness of a spec with industry stakeholders, may not be fast enough to keep up. ENERGY STAR is facing the same constraints.”

Establishing a good working relationship with the electronics industry, dispersing research and educating consumers appear to be the best routes.

In an important first step, CEE has begun working with the Consumer Electronics Association (CEA), a trade

**Continued on page 15**

## CEE Chair defines basis for business relationship

Gene Rodrigues got the Industry Partners Meeting off to a rousing start with an animated 75-minute presentation that demystified the concept of energy efficiency and made a compelling business case for industry-to-industry partnerships.

What are industry-to-industry partnerships? They are collaborative efforts between the energy-efficiency program "industry" and traditional industries like HVAC, lighting, motors, etc.

Why are industry-to-industry partnerships beneficial? Because they make good financial sense for efficiency program administrators as well as industry stakeholders.

Rodrigues, Director of Energy Efficiency at Southern California Edison and Chair of the CEE Board, explained – in no uncertain terms – how it all comes together, detailing the how, why and where of energy efficiency.

Speaking to the industry representatives in the audience, he said, "Energy-efficiency program administration is a \$2.7 billion industry (referring to the estimated public funding for North American programs in 2006).

"Working together, we can put that \$2.7 billion to better use – not just for *our* customers but for *your* customers."

### Efficiency as an industry

The fundamental premise of Rodrigues's presentation is that the administration of energy-efficiency programs throughout North America has evolved into a growing, vibrant industry of its own and, as such, is affected by many of the same issues as other industries.

In the beginning, he noted, efficiency program staff were seen as "do-gooders," people who cared about the environment and were trying to do something about it. That is no longer the case.



**'The energy-efficiency do-gooder' sitting next to you is actually your next strategic business partner.'**

**Gene Rodrigues**  
**Southern California Edison**  
**CEE Board Chair**

"We have come together to form the energy-efficiency program industry," said Rodrigues. "To understand us is to do business with us. To do business with us is to make money.

"Energy-efficiency program administrators create opportunities that are good for business."

For industry representatives, he explained, "the energy-efficiency 'do-gooder' sitting next to you is actually your next strategic business partner."

Rodrigues pointed out that energy-efficiency administrators "are business people, too. We should be able to make money doing energy efficiency. We are not forcing our shareholders to bleed dollars. When an industry spends \$2.7 billion, it has to deliver the goods."

### Why do energy efficiency?

For the benefit of industry stakeholders in the audience, and other newcomers to the world of energy efficiency, Rodrigues explained how efficiency programming that ultimately reduces sales of the product (energy) could be a successful strategy for utilities.

There are three basic reasons why

selling less energy is good business, he said.

"First, we need to balance supply and demand," said Rodrigues. "In the energy-efficiency industry, we look at reducing demand first. We're trying to provide the least-cost reliable service.

"Second, we try to help customers save energy and money. You cannot survive in any business if your customers hate you. The only times customers think about us is when rates go up or there are blackouts. We're trying to provide the best service we can and increase customer satisfaction.

"Finally, we're also trying to foster a cleaner and greener environment. In light of all the research about global warming and pollution, we have a responsibility to environmental stewardship."

Energy-efficiency programs are funded by public money and are therefore driven by public policy. "We're accountable to policy-makers, customers, constituents and fiduciaries," said Rodrigues.

In addition, reducing demand is almost always more cost effective than increasing supply. Building a power plant is a highly expensive proposition that requires many years of advance planning with an uncertain forecast of actual usage. Energy efficiency is generally the least expensive way to meet increased demand.

In California, for instance, the four investor-owned utilities (Pacific Gas & Electric, San Diego Gas & Electric, Southern California Edison and Southern California Gas) are implementing efficiency programs in 2006-08 that are expected to save enough energy to avoid the construction of three 500 MW power plants.

### Funding sources

Twenty-seven states in the United States and three provinces, representing more than one-third of Canada's population, combined to spend nearly \$3 billion in energy-efficiency programming this year.

# INDUSTRY

## Estimated Energy-Efficiency Budgets for 2006 by State

Excludes renewables and most small municipal and co-op programs. Includes load management and low-income programs.

*Represented in millions of dollars*

### NORTHEAST

Connecticut	60.5
Maine	11.9
Massachusetts	148.1
New Hampshire	17.8
New Jersey	125.2
New York	268.9
Rhode Island	20.9
Vermont	17.9

### MIDWEST

Illinois	28.2
Indiana	2.3
Iowa	93.9
Kentucky	0.9
Michigan	15.0
Minnesota	99.9
Missouri	7.8
Ohio	15.8
Wisconsin	89.5

### SOUTHEAST

Florida	245.4
Georgia	27.7
Tennessee	14.1
Texas	82.9

### SOUTHWEST

Arizona	25.9
Colorado	24.1
Nevada	30.5
New Mexico	2.7
Utah	25.2
Wyoming	0.4

### PACIFIC NORTHWEST

Idaho	15.0
Montana	10.6
Oregon	51.0
Washington	66.4
BPA and NW Alliance	80.8

### CALIFORNIA

778.5

### HAWAII

18.9

### U.S. TOTAL

**\$2.52 billion**

### CEE CANADIAN MEMBERS

234.3

## ESTIMATED 2006 TOTAL = \$2.7 BILLION

Where is all the money coming from?

There are three major funding sources, the most common of which is the system-benefits charge (SBC).

The system-benefits (or public-goods) charge is a small fee added to utility bills that is earmarked for energy-efficiency programming. The fee and the programs are mandated by the state government.

Generally, there is a sunset clause or review period associated with the SBC so the charge can be evaluated and justified. System-benefit charges are subject to local politics and, in some cases, can be redirected to fund other needs of the state.

Procurement funding is another option

for utilities. "It's the new big thing," said Rodrigues. "The utility must apply to the state for funding as part of a long-term resource plan. It is not subject to state policies."

"Cap and trade" is a funding method by which polluters pay for the right to produce emissions.

In addition to creating a pool of money for energy-efficiency programming, it also provides an incentive to reduce emissions.

### Summation

Public policy in many states strongly supports energy-efficiency programming. On the national level, the U.S. Department of Energy and Environmental Protection Agency have teamed up with the National Association of

Regulatory Utility Commissioners (NARUC) to launch a National Action Plan for Energy Efficiency. More than 50 organizations nationwide – including utilities as well as public and private organizations – are taking the lead by supporting this effort.

"Our funding levels are up," Rodrigues said. "Let's work together to put the money to mutually advantageous use."

"I'd like people to walk away from this meeting and feel like they want to take advantage of this opportunity. Instead of learning from a distance, let's work together."

"We can monetize energy efficiency and create a sound business proposition for everyone."

# Meeting panel comments on impact, future of EAct incentives

At CEE's Industry Partners meeting, a diverse panel of experts examined the first year of the Energy Policy Act (EAct) 2005, analyzing the opportunity to take advantage of the tax incentives for commercial buildings. Tax deductions, when combined with existing program incentives offered by CEE members, can make a more attractive package for local customers.

Thus far, however, the actual implementation of these tax incentives has been a challenge.

At the conclusion of the session, two things became abundantly clear: the commercial lighting industry is in the best position to take advantage of this opportunity and virtually everyone favors an extension.

On June 2, 2006 the IRS issued a notice explaining how commercial building owners or leaseholders can qualify for this tax deduction, which "allows taxpayers to deduct the cost of energy-efficient property installed in commercial buildings."

According to the notice, "the amount deductible may be as much as \$1.80 per square foot of building floor area for buildings that achieve a 50-percent energy savings target ... Buildings below the 50-percent threshold may, nevertheless, qualify for a deduction of up to 60 cents per square foot of building floor area if they meet a 16<sup>2</sup>/<sub>3</sub>-percent energy savings target."

The notice also stipulates the following: "Before claiming the deduction, the taxpayer must obtain a certification that the required energy savings will be achieved ... The Department of Energy will create and maintain a public list of software that must be used to calculate energy savings for purposes of providing the certification. It also provides a process that software developers must use if they desire to have their software included on that list."

The panel at the Industry Partners Meeting included David Goldstein (NRDC), who discussed politics and policy; Kyle Pitsor (NEMA), who talked about the NEMA Coalition's efforts; Joe Howley (GE Lighting), representing the



**David Goldstein (left) and Joe Howley were among the panelists discussing EAct 2005.**

commercial lighting industry; Jim Mullen (Lennox), representing the HVAC industry; and Jim Parks (SMUD), who discussed the efficiency program viewpoint.

"We need a national program that is consistent everywhere and a multi-year commitment," said Goldstein. "Two years is not enough time to transform the market; we would need at least four. We're trying to get an extension. It's not likely we'll hear anything this year but we're hoping for news in 2007."

About a year ago, the National Electrical Manufacturers Association (NEMA) put together a coalition of interested stakeholders to spread information about the EAct tax incentives and how they could be applied to commercial buildings. Monthly meetings were held and a coalition Web site was launched ([www.efficientbuildings.org](http://www.efficientbuildings.org)).

The interim rules for commercial lighting, released well before the guidance for commercial buildings, set guidelines

for achieving the tax incentives and also established rules for partial tax deductions. "Lighting can be done more quickly and easily than changes to HVAC or building envelope," said Howley.

The lighting industry was able to take advantage of EAct 2005 more readily than other industries. The Web sites of the three major lighting manufacturers – GE, Philips and Sylvania – all devote sections explaining how to take advantage of the tax incentives.

Mullen noted that a 50 percent increase in efficiency above the ASHRAE standard is a "lofty goal and we have a pretty small window to do all the work." He is hoping for an EAct extension and "simpler qualifying criteria."

At Sacramento Municipal Utility District, efforts have focused on educating customers about the opportunity. Parks agreed about the difficulty in meeting the 50 percent target and the limited time frame. "Only small commercial construction projects can take advantage of the incentives," he said.

CEE will further explore the opportunity for using the tax incentives to promote high-efficiency lighting through its Commercial Lighting Committee. CEE will also inform members about any relevant changes.

A page on the CEE Web site ([www.cee1.org/com/bldgs/epact.php3](http://www.cee1.org/com/bldgs/epact.php3)) contains links that provide information about EAct 2005.

## CEE is exploring new HECAC tiers

CEE's high-efficiency specifications for commercial HVAC are being expanded to include higher tiers. Finalization of these tiers is expected by the end of the year.

In 2003, CEE eliminated its Tier 1 in response to increasing federal minimum standards. From that point forward, the High-Efficiency Commercial Air Conditioning and Heat Pumps Initiative (HECAC) had only included one tier. This initiative is currently promoted by 32 CEE members across North America.

The expanded version now comprises three tiers. The initial draft specification was circulated for industry comment in April and, with important input from manufacturers, is currently being revised. This new version is expected to be finalized in November and presented to the Board of Directors for approval by the end of the year.

Ongoing discussions with the Air Conditioning and Refrigeration Institute (ARI) and its members have explored the use of Integrated Part Load Value (IPLV) as an optional substitute metric for EER in large equipment.

ARI is in the process of revising the test procedure for IPLV. In the meantime, CEE's Commercial HVAC Committee will re-evaluate this issue when a new test is in place. This could be as soon as November 2007.

# Commercial Kitchens Initiative engages additional stakeholder group

## Key end-user groups provide an important perspective for program implementers

As CEE's Commercial Kitchens Initiative continues to grow, new partners are coming on board and new strategies are evolving. At the Industry Partners Meeting, the Commercial Kitchens Committee met face-to-face with some key stakeholders for the first time.

"We made some important strides in building relationships," said CEE Program Manager Afroz Khan, who is managing the initiative.

"We met some trade associations, manufacturers and end-user groups that we hadn't worked with before. It's valuable to get their perspective and they learned quite a bit about how our initiative works."

One of the objectives of the breakout sessions was to develop a common understanding of local, regional and national distribution channels for commercial food service equipment and clarify how high-efficiency equipment is identified, selected and installed, especially within the restaurant sector.

From this discussion, the group will identify opportunities for energy-efficiency programs.

Newcomers included representatives from the Supply and Equipment Foodservice Alliance, a network of equipment distributors and manufacturers; the National Restaurant Association; Foodservice Consultants Society International (FCSI); and Brinker International, a corporation that owns, operates and franchises a number of restaurant chains across through country.

Clifton Geisler of Brinker International reinforced the initiative strategy of targeting large restaurant chains.

Address the needs of the large chains, he said, and the small independent restaurants will follow. Geisler noted that large restaurant chains have the money and motivation to work with energy-efficiency program administrators.

CEE is continuing to work closely with



**Melisa Marks of Southern California Gas (left) and Carol Kralicek of TurboChef provided important insights into the commercial kitchens market.**

ENERGY STAR® in the Commercial Kitchens Initiative. ENERGY STAR has helped establish industry contacts and has contributed research and overall guidance for this sector based on its commercial food service program.

Carol Kralicek, representing TurboChef and FCSI, explained some of the major issues facing the commercial kitchens sector during the main session of the Industry Partners Meeting.

**'Energy and environmental issues are moving up the priority list. We need to develop solutions that save energy *and* labor. Education about life-cycle costing is very important.'**

*Carol Kralicek  
TurboChef and FCSI*

"The greatest challenge is recruiting and retaining employees," she said.

"The industry is also under a great deal of pressure, from the public and the regulatory community, to provide healthy foods.

"But energy and environmental issues are moving up the priority list. We need to develop solutions that save energy *and* labor. We're also looking to ENERGY STAR to broaden its list of eligible equipment. Education about life-cycle costing is very important."

At the breakout session, Kralicek encouraged the Commercial Kitchens Committee to engage food service consultants through their trade

association, FCSI. "It will provide an opportunity to educate consultants about ways that efficiency programs can better serve the end-user," she said.

## Member programs

The number of CEE members implementing commercial kitchen programs has doubled (to 15) since the inception of the initiative. In addition to products addressed by the initiative (refrigerators, freezers, ice-makers, fryers and pre-rinse spray valves), products qualified by ENERGY STAR and the Food Service Technology Center are under consideration for inclusion into the initiative.

Several CEE members shared information about their programs. Melisa Marks of Southern California Gas stressed that "making it easy for customers to participate" was a high priority. SoCal Gas has made a strong effort to develop community partnerships and offers a demonstration kitchen to showcase efficient products.

NYSERDA is also a strong advocate of developing relationships with local restaurant owners. Through a commercial kitchen pilot program, NYSERDA has partnered with local restaurant association chapters to promote the energy-efficient commercial kitchen products. The City of Austin is working with Austin Energy to promote water efficiency in area restaurants.

## Next steps

Over the next few months the Commercial Kitchens Committee plans to monitor discussions between EPA and commercial dishwasher manufacturers regarding revisions to ENERGY STAR's draft dishwasher specification.

Other committee activities include a review of current ENERGY STAR specifications and discussion with the PG&E Food Service Technology Center (as well as other sources) to determine the inclusion of a steamer specification to the initiative.

The Commercial Kitchens Committee will meet at the next CEE Program meeting in Long Beach, Calif., (Jan. 19-20) and prepare a work plan for 2007.

# Engineers, manufacturers weigh in on water/wastewater

One of the benefits of CEE's Industry Partners Meeting is that it brings together a broader array of perspectives and expertise in specific areas than would ordinarily be present at a CEE meeting.

Such was the case at the most recent meeting in Dallas, where engineering experts, researchers, pump manufacturers and consultants serving the municipal water and wastewater sector provided their insights to members during two breakout sessions.

Facility designers and engineers can play a key role for efficiency since their recommendations on treatment process and equipment often have a direct impact on facility operating performance, including energy consumption.

According to Michael Dimitriou of ITT's Advanced Water Group, energy represents a substantial and rising cost to water and wastewater utilities, making it one of the sector's top five long-term concerns.

He noted that new, more effective water treatment technologies, such as ozone and ultraviolet, are becoming more popular, requiring significantly more energy than conventional treatment processes.

In light of these trends and the opportunity for significant energy savings, CEE launched its Municipal Water/Wastewater Facility Initiative last year. Its primary goals are to increase awareness about the benefits of energy efficiency and to support market adoption of "best practices."

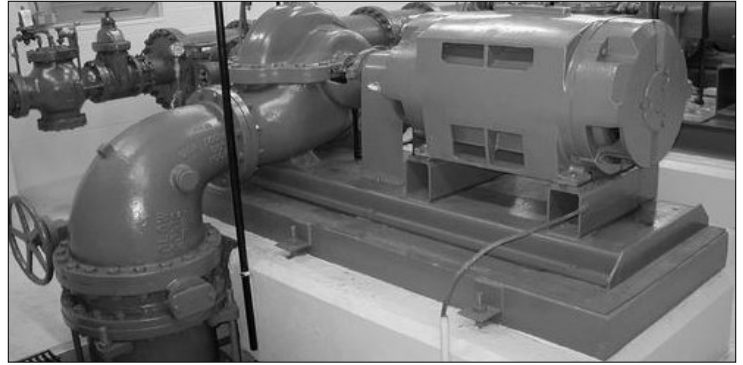
In his presentation, Dimitriou suggested some strategies for program administrators to consider when implementing efficiency improvements in these facilities. Some of the recommendations involved a general monitoring of the system (such as "know when the station power meter is read and monitor power bills") while others required technical adjustments ("analyze pump stations for pressures, flows and storage requirements for peak operational demands").

He also suggested that programs help water facilities utilize supervisory control and data acquisition (SCADA) system, which uses a computer for gathering and analyzing real-time data, to monitor and manage energy.

*The ITT presentation can be accessed on the CEE Web site ([www.cee1.org](http://www.cee1.org), see "Meeting Presentations" on left side of home page).*

During the discussion, Scott Jarman of Austin Energy said that offering assistance early in the planning process can enable program administrators to have an opportunity to "insert" energy efficiency into the design of new facilities.

From an operational perspective, Angie Ong-Carrillo of PG&E noted that a lack of knowledge and/or management strategy is a primary barrier to efficiency in the sector. "Water and wastewater facility managers do not generally have the ability to compare the energy performance of their plants over time, and they're not paying the bills,



either," she said. "So their awareness of energy usage can be minimal."

CEE Industrial Program Manager Ted Jones, who manages the initiative, pointed out that the AwwaRF benchmarking project could help address this need (see next page).

Pumping systems are another significant opportunity for energy savings within water and wastewater facilities. In a separate breakout session, Dave Flinton of ITT described how pump system efficiency can be improved by better understanding how pumps and systems interact (see below).

## Next steps

"These are just the type of design, system and operational efficiency opportunities that members want to identify as 'best practice' and share with each other through the CEE Water and Wastewater Initiative," said Jones.

"The engineering and pump industry experts provided us with many good ideas and suggestions. During the January CEE meeting in Long Beach, the Water/Wastewater Committee will have the opportunity to review this information and identify the most effective measures for members to incorporate into their programs."

## Pump systems optimization

Pump system optimization is addressed in two CEE initiatives, the Motor Systems Initiative and the Municipal Water and Wastewater Initiative. CEE members welcomed four pump manufacturers to the Dallas meeting to offer their perspective on pump system efficiency opportunities in the water/wastewater sector.

According to Dave Flinton of ITT's Advanced Water Group, 75 percent of a pump system's total life-cycle cost can be accounted for in energy and maintenance costs. He noted that efficiency can be improved by helping customers better understand and manage how pumps and systems interact.

He described common energy-saving opportunities, such as replacing oversized pumps, introducing throttling valves, trimming impellers, and adding variable speed drives (when appropriate). He also described tools such as DOE's Pumps System Assessment Tool (PSAT) and the Pump System Improvement Modeling tool (PSIM) that could help customers size pumps correctly.

CEE's Water/Wastewater Committee is currently reviewing the PSIM tool to determine potential applicability for efficiency programs and will be following up with the pump industry and the developer.

## Draft benchmarking index for water/wastewater plants released

A benchmarking index for water and wastewater plants is nearing completion and could be available by the end of the year. Stephen Carlson of CDH Energy Corporation presented a preliminary version during a breakout session at the Industry Partners Meeting, including a beta benchmarking spreadsheet tool.

The objective of this project is to produce industry-wide energy performance metrics to describe the performance of water and wastewater utilities. These metrics will subsequently be incorporated into a comparison framework (benchmarking tool) to facilitate internal and external comparisons within and between utilities.

The work for this project is being funded by the American Water Works Association Research Foundation (AwwaRF), with support from the

California Energy Commission and NYSERDA. A draft methodology has been released for comment.

CEE and EPA are members of a project advisory committee, which includes CEE members NYSERDA, CEC and PG&E. This advisory committee is currently reviewing the draft methodology, which is based on a nationwide survey of energy use, and other key characteristics, of water and wastewater facilities. The analysis is based on the multi-parameter approach that EPA used in the development of an ENERGY STAR benchmarking tool for commercial buildings.

Recently AwwaRF agreed to release the survey data and the beta benchmarking spreadsheet tool to EPA and Oak Ridge National Laboratory staff for the purpose of more thoroughly reviewing the data, calculations and assumptions. CEE's Water and

Wastewater Committee will be in communication with EPA during this review.

Both CEE and ENERGY STAR® are hoping to use the resulting benchmarking tool in their water/wastewater programs.

"A nationally recognized benchmarking tool that is supported by the water industry, ENERGY STAR and the energy-efficiency program community would be a major asset in raise awareness levels of facility energy performance and energy-efficiency opportunities," said CEE Industrial program Manager Ted Jones. "We look forward to working with ENERGY STAR to review the methodology."

Katy Hatcher of EPA indicated that this topic will likely be on the agenda at the ENERGY STAR Water and Wastewater Focus meeting scheduled for the spring of 2007.

## Commercial Lighting Committee takes a look at industry trends

Lighting is one of the major opportunities for energy savings in the commercial sector. About one-quarter of the total energy consumption by commercial buildings is used for lighting.

With many cost-effective energy-saving technologies readily available, it's a question of educating end-users and developing effective program strategies.

CEE's Commercial Lighting Committee convened at the Industry Partners Meeting last month in hopes of beginning the development of a long-term vision for efficiency programs. The goal was to examine trends in the industry, learn about current member program approaches and see what steps can be taken – by CEE members as well as industry – to accelerate the adoption of efficient commercial lighting.

"We want to look beyond specific lighting applications, and see what major energy-saving opportunities are developing," said CEE Program Associate Susan Loucks. "If we can understand larger trends, we will be able to move proactively to develop specifications or other guidance."

Seven manufacturers (plus Kyle Pitsor of the National Electrical Manufacturers Association) and 21 CEE members attended the session. Attendees presented their perspectives on upcoming changes in lighting technology, design and behavior, and explored possibilities for strategic partnerships.

During his presentation, Joe Howley of GE Lighting explained that a number of trends are making a big impact on manufacturers. For example, commercial new construction is in an upswing. Thus builders have incentives to look for



energy-efficient lighting options for several reasons:

- Building codes are becoming more stringent
- Voluntary "green" building programs (ENERGY STAR®, LEED, etc.) are becoming more prevalent and popular.
- The Energy Policy Act of 2005 is providing tax incentives for commercial building owners to upgrade their lighting systems.

Several manufacturers noted that, due to technological developments, there are more high-efficiency products in the market than ever before. Builders can choose from "premium" 32-Watt T8 systems, reduced-wattage T8 systems, T5s, ceramic metal halide systems and compact fluorescents. Major advances have also been made in developing energy-efficient ballasts and fixtures.

The increased pressure for lighting efficiency, as well as increased technological options, has sparked some innovation in member programs. Albert Chiu of PG&E explained how his company is partnering with local distributors to increase the stocking of high-efficiency lamps and ballasts.

One of the important components of this partnership is the education of sales representatives, who can then recommend higher-efficiency products, or "up sell," to customers. Other programs offer incentives to the customer.

While these advances illustrate significant energy-saving opportunities, the proliferation of program approaches and technologies also can create confusion for consumers. In 2007, CEE's Commercial Lighting Committee will be addressing this issue, incorporating lessons and insights from this breakout session into their work.

# Austin Energy campaign promotes 'plug-in' hybrid automobiles

Although CEE doesn't address transportation efficiency, Austin Energy (a CEE member) is pursuing energy efficiency and emission reduction through a bulk-purchase campaign. In the past, CEE has successfully used this type of bulk-purchase strategy to promote residential refrigerators.

Austin Energy is attempting to create a national market for Plug-In Hybrid Electric Vehicles (PHEVs) and thus convince automobile manufacturers to produce them en masse.

PHEVs are outfitted with a battery pack sufficient to power the vehicle 20-60 miles on battery charge alone. The battery can be recharged from a standard electric outlet at a cost of less \$1 per day (based on current rates). Batteries can be charged at night, when electricity demand is lowest.

Considering that half the cars on America's roads are driven

25 miles a day or less, a plug-in with a 25-mile range battery could eliminate gasoline use in the daily commute of millions of Americans.

This is the theory behind Austin Energy's Plug-In Partners campaign, which was launched earlier this year and targets local and state governments, utilities, and environmental, consumer and business organizations. Austin Energy has been soliciting "soft" (non-binding) orders from partners around the country in an attempt to build a demand for PHEVs. At the present time, these vehicles are only available as prototypes.

For further information about Plug-In Partners, see the campaign Web site ([www.pluginpartners.org](http://www.pluginpartners.org)) or contact Lisa Braithwaite of Austin Energy at 512-322-6511.

## CEE members and industry find common ground

**Continued from page 1**

may have spoken with over the phone or conversed with through e-mail," he said. "This really solidifies the relationship and fosters additional communications in the future.

"I particularly enjoyed a session that I attended regarding gas water heating. I believe that it is important to stay abreast of new and emerging technologies, particularly in areas outside of your expertise. These sessions make it easy to continue learning - which is critical to future success."

For many of the industry stakeholders, it was an opportunity to obtain important information about their potential roles in energy-efficiency programming. "My understanding of EPA's Act and how the rules and regulations apply to lighting was really made clear by the presentations," said Greg Murphy, Product Manager for Maxlite.

"It started my thinking on how we should participate."

Michael Dimitriou, Director of Strategic Technology for ITT Corp., presented and participated in the water/wastewater sessions.

"The meeting improved my understanding of the efforts by CEE to enhance cooperation between industries on energy issues, especially conservation and improved energy management techniques," he said. "I believe it will foster a closer working relationship."

Dimitriou also found some of the other sessions, those outside of his line of work, to be informative.

"It gave me valuable insight into how other industries were addressing issues similar to mine," he said.

"Dealing with changing regulations [was an area of common interest]."

Many agreed to continue the dialogues through the ongoing CEE program committees. CEE staff have already communicated the "next steps" to industry participants. Members are encouraged to check their program committee agendas for follow-up activities and invited industry participation.

## Industry representation at Industry Partners Meeting

### Trade associations

Air Conditioning and Refrigeration Institute  
Air Conditioning Contractors of America  
American Water Works Assoc. Research Fnd.  
Consumer Electronics Association  
Foodservice Consultants Society International  
Gas Appliance Manufacturers Association  
National Electrical Manufacturers Association  
National Restaurant Association  
Supply and Equipment Foodservice Alliance  
Water Environment Research Foundation

### HVAC manufacturers

Bard  
Carrier Corp.  
Copeland/Emerson Climate Technologies  
Daikin  
Lennox International  
McQuay International  
Mitsubishi Electric  
Nordyne  
Rheem Heating and Cooling  
Trane/American Standard

### Water heater manufacturers

A.O. Smith  
Noritz America  
Rinnai

### Water/wastewater

CH2M Hill  
Energenex  
ITT Advanced Water Treatment

### Commercial kitchens

Brinker International  
Delfield, LLC  
Hobart  
Hoshizaki America  
Ice-O-Matic  
Manitowoc Ice Inc.  
Niagra Conservation Corp.  
True Manufacturing  
TurboChef Technologies

### Lighting manufacturers

General Electric Lighting  
Osram/Sylvania  
Kichler Lighting  
Lithonia Lighting  
Litex Industries  
MaxLite  
Philips Lighting Company  
Quorum International  
Radcliffe Advisors (research group)  
Seagull Lighting  
Sunpark Electronics  
Universal Lighting Technologies

### Pump Manufacturers

ABS Pumps  
Grundfos Pump Corporation  
ITT Goulds  
Moyno Inc.

## Consumer electronics

Continued from page 7

group that has more than 2,100 members and represents the entire range of the industry (manufacturers, retailers, distributors, etc.).

### Measuring energy consumption

Doug Johnson, Senior Director of Technology Policy at CEA, made a presentation at the general session of the Industry Partners Meeting, explaining some of the basic trends and opportunities.

Johnson said that the industry, as a whole, supports the concept of energy-efficiency promotion through voluntary programs. He also added that this type of promotion can be problematic because there is very little reliable data.

"Many estimates of the electricity consumption by consumer electronics were developed in the late 1990s," Johnson said. "Products have changed dramatically over the last decade and so have their energy consumption characteristics."

Thus the measurement of current energy consumption and establishment of baseline levels may be inaccurate. In order to bring data up to date, CEA has hired a research and development firm to study and report current energy consumption for consumer electronics products.

Johnson indicated that this research will be publicly available. Results of the study are expected to be released in the near future.

CEE's committee will review the results as part of its upcoming work.

### CEE's Electronics Committee

In addition to maintaining ongoing contact with the electronics industry, CEE's Electronics Committee is involved in (and monitoring) a number of near-term activities.

#### *ENERGY STAR computer specification*

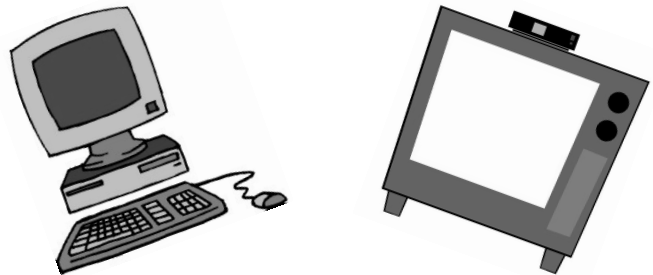
The committee is providing comments for an updated ENERGY STAR computer specification, which is expected to become effective in July 2007. ENERGY STAR has achieved great success with its monitor specification and monitor power management efforts.

With the revision of the ENERGY STAR computer specification, the program expects to increase its promotion of energy-efficient computers and computer power management.

#### *Televisions*

This could be an area with great savings potential because there are so many televisions in service and the trend is toward larger screens. The committee will monitor current efforts by EPA, CEA and others to develop an internationally accepted television test procedure that includes both active and standby modes, a necessary first step toward a revised ENERGY STAR television specification.

CEE is also keeping an eye on a movement to provide consumers with the federal EnergyGuide label for



televisions, and has commented to the Federal Trade Commission several times in support of such labeling.

#### *Set-top boxes*

When the U.S. moves from analog to digital broadcasting, a transition scheduled to take place in 2009, there may be an opportunity to encourage energy-efficient digital-to-analog (DTA) conversion boxes.

DTAs will be required by consumers still using an analog television at that time. The federal government plans to offer \$40 rebates for the purchase of DTAs, and recently requested input on the details of this rebate program.

A number of CEE members, including the Natural Resources Defense Council and ACEEE (as well as EPA and retailers such as Wal-Mart), commented in favor of an energy-efficiency component to the rebate.

In addition, EPA plans to develop an ENERGY STAR specification for DTAs in advance of the 2009 transition. The electronics committee is monitoring these DTA-related opportunities, as well as other set-top box developments.

#### *Research and information sharing*

The Electronics Committee serves as forum for members to share research and data on electronics, and to identify future research needs. In addition to the CEA electronics research mentioned above, several CEE members are undertaking research of their own, which they expect to complete in the upcoming months.

All public information related to electronics that CEE obtains will be included in CEE's MAPE Clearinghouse at [www.cee1.org/eval/clearinghouse.php3](http://www.cee1.org/eval/clearinghouse.php3).

#### *Consumer education*

The committee is looking into the coordination of consumer messaging on electronics by CEE members. ENERGY STAR, which posts consumer electronics information on its Web site, already provides a good platform for this process. Several CEE members currently have Web pages devoted to energy-saving opportunities for electronics.

For further information about CEE's Electronics Committee, contact Erica Schroeder at [eschroeder@cee1.org](mailto:eschroeder@cee1.org).

## CEE welcomes new Program Associate

Jenny Harvey joined CEE in September 2006 as an Industrial Program Associate. She provides support to both the *Motor Decisions Matter* campaign and CEE's Premium-Efficiency Motors and Motor Systems Initiatives.

Jenny holds a Masters in Teaching Secondary Science from Johns Hopkins University and a Bachelors degree in Biology from Swarthmore College.



**JENNY HARVEY**  
Industrial programs

## Five new CEE members

In the past few months, CEE has welcomed five new members: CenterPoint Energy (Minnesota), City Utilities of Springfield (Missouri), Efficiency New Brunswick, Natural Resources Canada and Terasen Gas (British Columbia). CEE now has six Canadian members, 86 overall.

"We are very enthused about joining CEE since this organization is such a reputable clearinghouse for energy-efficiency program information," said Cara Shaefer, Director of Energy Management & Conservation at City Utilities. "We have already tapped into this vast resource in our program design efforts. We look forward to contributing to CEE in the future."

In adding three new Canadian members, CEE continues its evolution into a true North American organization.

"Our mandate is to promote energy-efficiency measures in all sectors of New Brunswick," said Elizabeth Weir, President and CEO of Efficiency NB. "Our membership in

CEE provides us with access to leading edge energy-efficiency advice and relevant technical expertise. It also affords us the opportunity to learn best practices and properly implement them."

John Cockburn of the Office of Energy Efficiency at Natural Resources Canada (NRCan) is impressed by CEE's information sharing and collaborative activities.

"This will play an important part in moving ahead the market transformation activities of NRCan and its many partners," he said.

## A toast to CEE's 15th anniversary

CEE celebrated a milestone at the Industry Partners Meeting. Mike Stockard of TXU Electric Delivery arranged for his company to host a reception following the first day of meeting for social networking between members and industry. Gene Rodrigues kicked things off by offering a toast to CEE's 15th anniversary.

"I'm tremendously proud of the way we've come together," said Rodrigues, Director of Energy Efficiency at Southern California Edison and CEE Board Chair. "There have been 15 years of wonderful accomplishments."

Rodrigues saluted the CEE staff, calling them to the front of the room. He also acknowledged some original CEE members – Bonneville Power Administration, Pacific Gas & Electric, Natural Resources Defense Council, Sacramento Municipal Utility District, and Southern California Edison – as well as individuals at the meeting who had served on CEE's first Board of Directors (David Goldstein and Janis Erickson).

"I'd like to extend special thanks to EPA and DOE for giving us seed money to get started," said Rodrigues, "and I want to thank industry for working with us."