

CEE and ACCA align on HVAC QI specification

On May 19, the CEE Board of Directors updated CEE's Quality Installation Specifications for Residential and Commercial Equipment with the official requirements of a new ANSI Standard for Quality Installation.



CEE members and other stakeholders interested in promoting better HVAC installation practices now have an industry-supported consensus definition of what constitutes a quality installation (QI). On April 19, the Air Conditioning Contractors of America (ACCA) announced that its "HVAC Quality Installation Specification," was formally recognized by the American National Standards Institute (ANSI) as a national standard. CEE represented membership interests during this process, which also

involved a broad coalition of industry stakeholders and individual CEE members.

CEE's support to ACCA has facilitated a specification that meets both member and industry needs. Now CEE is adopting this specification to illustrate alignment and facilitate market transformation.

The QI Specification identifies consensus requirements associated with quality installations, acceptable procedures for measuring or verifying the attainment of those requirements, and acceptable forms of documentation to show compliance with requirements.

"Our expectation is that this new ANSI standard will be embraced by HVAC contractors and distributors, leading to

Continued on next page

Consumer Electronics Initiative launched

Estimates of consumer electronics electricity use in typical U.S. households range from 11 to 13 percent, according to the Consumer Electronics Association (CEA) and the Environmental Protection Agency (EPA) respectively. EPA predicts this percentage will increase to 18 by 2015. With the adoption of a new Consumer Electronics Initiative in June, CEE is poised to help members address this area.



"The Initiative has two goals," said Rebecca Foster, CEE Senior Program Manager. "To encourage and support member efforts to increase the efficiency of consumer elec-

tronics and to develop a consistent definition of energy efficiency in the market."

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enhanced partnerships between CEE members and trade allies in local markets” explained CEE’s John Taylor, who organized CEE’s participation in the project. The Air Conditioning and Refrigeration Institute (ARI) and the Gas Appliance Manufacturers Association (GAMA)—two major trade associations of the HVAC industry—have both endorsed the standard and have taken steps to make it available to their members.

ANSI recognition of the ACCA QI Specification marks the culmination of a four-year process that began with a small meeting of CEE members, manufacturers, and staff from ACCA and ARI. During the meeting the parties agreed that improving HVAC installation practices represented the largest energy-saving opportunity in this sector and was a challenge that stakeholders could address jointly.

ACCA and CEE organized a workshop in March 2005 to discuss market transformation strategies for improving HVAC installation practices. The group of more than 50 manufacturers, HVAC contractors, utilities, efficiency advocates, and government agencies agreed a consensus definition was a necessary first step to a successful partnership. Many of those in attendance volunteered to serve on the QI Specification Committee.

Skip Snyder, president of the Snyder Company (an HVAC contractor) and Chair of ACCA’s Quality Installation Specification Development Committee, said, “Installation of quality HVAC systems is more than just using high-efficiency products and equipment. The QI Specification focuses on elements associated with ensuring that HVAC equipment is properly sized, selected, and installed for residential and commercial applications. These elements have a large impact on occupant satisfaction and energy savings.”

‘Installation of quality HVAC systems is more than just using high-efficiency products and equipment.’

*Skip Snyder
President of the Snyder Company and
Chair of the Quality Installation
Specification Development Committee*

CEE and ACCA have agreed to a license agreement that will allow CEE and its members to copy and distribute the QI Standard for use in voluntary incentive programs. The Standard will soon be available for free download on the CEE Directory of ARI-Verified HVAC Equipment. Taylor explained, “The CEE Equipment Directory is getting more than 300,000 hits per month; offering the QI Standard there will take advantage of all the equity CEE and its members have built on that website.”

Next step: Credible verification of the QI standard

ACCA has formed a new Committee that will develop verification protocols to enable demonstration of compliance with the ANSI/ACCA QI

Standard. Items to be addressed include:

- Verification approaches and frequency
- Dispute resolution
- Verifier skill sets/characteristics
- Necessary administration and oversight

Credible and cost-effective strategies for verifying when QI is achieved are believed to be necessary for a national program. Representatives of National Grid, NEEP, NSTAR, Oncor Electric Delivery, Southern California Edison, Wisconsin Focus on Energy, and Xcel Energy will be serving on this committee. John Taylor of CEE will represent the CEE HVAC Committee and keep all interested members abreast of important developments. CEE will be updating its HVAC Initiative (see related story below) and will use the ACCA deliberations to inform that process. EPA has indicated they will look to the outcomes of this effort to inform development of an ENERGY STAR® program for QI.

CEE consolidates HVAC Committee work

CEE’s Board of Directors first approved initiatives for Commercial and Residential HVAC equipment in 1993 and 1995 respectively. These initiatives have been updated since then to add performance requirements that address peak demand reduction. Also, both initiatives now have voluntary installation specifications. As installation and maintenance grow in relative importance, CEE will evaluate the appropriateness of a more prominent roll in the CEE Initiative.

In an effort to use CEE staff resources more efficiently, CEE is also planning to merge the residential and small commercial (less than 65,000 Btu/h) HVAC work under the direction of John Taylor. According to industry, the equipment is essentially the same, except for the “phase” of power, which does not affect the integration of high-efficiency technologies. In recognition of this fact, HVAC manufacturers have previously requested that CEE align its equipment performance requirements and specification revision process for residential and small commercial HVAC equipment. Similarly, the definition of a quality installation is relevant for both residential and small commercial equipment.

In recognition that the end-user of small commercial HVAC equipment can be very different from a residential customer, CEE will maintain residential and small commercial subcommittees to address issues specific to respective markets.

UPCOMING EVENTS

Date	Event	Contact
Sept. 9-12	NASEO Annual Meeting ATLANTA, GEORGIA	703-299-8800 www.naseo.org
Sept. 17-19	AESP's Technology Symposium HAUPPAUGE, NEW YORK	480-704-5900 www.aesp.org
Sept. 25-26	CEE's 4th annual Industry Partners Meeting ST. LOUIS, MISSOURI	617-589-3949, ext. 206 www.cee1.org
Sept. 30-Oct. 2	ACEEE National Conference on Energy Efficiency as a Resource BERKELEY, CALIFORNIA	302-292-3966 www.aceee.org
Nov. 11-14	Alliance to Save Energy's Energy Efficiency Global Forum & Exposition WASHINGTON, D.C.	202-857-0666 www.ase.org
January 9-10	Midwest Energy Solutions Conference CHICAGO, ILLINOIS	312-587-8390 www.mwalliance.org
January 16-18	CEE Program and Board of Directors Meetings LONG BEACH, CALIFORNIA	617-589-3949, ext. 206 www.cee1.org

CEE meetings

NEXT

CEE Industry Partners Meeting

CEE's Fourth Annual Industry Partner Meeting will be held September 25-26, 2007. The meeting will be held at the Millennium Hotel located at 200 South 4th Street, St. Louis, MO.

This event provides a unique opportunity to learn about the trends facing the Energy Efficiency Program Industry and to advance important industry partnerships.

For meeting details including an agenda and on-line registration, see the CEE website (<http://www.cee1.org>).

For further information about CEE meetings, contact Laura May at 617-589-3949, ext. 200, or meetings@cee1.org



UPCOMING

- **CEE Program, Board Meetings**
Jan. 16-18, 2008
Long Beach, Calif.

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Comments, story ideas, news items and calendar listings should be sent to cee@cee1.org.

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Consumer Electronics Initiative launched

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CEE plans to work with the ENERGY STAR program extensively on the second goal.

Activities

In order to achieve these goals, CEE plans to undertake the following five activities:

Working with ENERGY STAR.

By convening members to develop consensus comments on ENERGY STAR specification revisions, CEE hopes to ensure that the program meets members' needs. Through this activity, CEE expects to improve the relative value and meaning of ENERGY STAR in the consumer electronics market and ultimately increase the market penetration of qualified products.

Working with members to provide consumer education.

Helping members coordinate these efforts will lead to a more consistent national message and greater impact. CEE also plans to inform members of educational activities of other stakeholders, such as the CEA. In their comments on the proposed initiative, CEA noted, "This is one of the biggest opportunities in this Initiative. There seems to be a lack of coordination and consistent messaging among state energy offices and utilities in providing current and helpful information to consumers and highlighting the importance of ENERGY STAR in addressing energy efficiency in the consumer electronics marketplace."

Developing program guideline documents. These documents will identify program opportunities and approaches for members. They may include upstream incentives and the development of product efficiency specifications above ENERGY STAR levels. This activity will enable members to share ideas



and experiences, while also educating industry and other stakeholders on efficiency program priorities and approaches.

Building relationships with industry.

CEE will communicate program activities, priorities, and goals to the consumer electronics industry. Since June 2006, CEE has routinely communicated with CEA and plans to include individual consumer electronics manufacturers in future outreach activities.

Other Initiative support based on member needs. This may include conducting market research, developing new efficiency specifications, monitoring electronics news and events, and/or creating program summaries. Such activities will keep members up-to-date about this product area, helping inform program decisions.

Focal areas

Because televisions are among the largest users of electricity in the electronics category, they are one of three initial products targeted by the Initiative. CEE plans to educate members on the various television technologies (e.g., CRT, LCD, plasma, etc.), bring them together to comment on ENERGY STAR specifications, and help them develop appropriate program approaches.

Like televisions, set-top boxes (STBs) also are relatively large energy consumers. CEE expects to convene members to comment on the current ENERGY STAR specification revision and, after it is complete, lead discussions on program approaches.

Computers—particularly when combined with the various devices operating in conjunction with them like monitors, routers, modems, printers, and fax machines—consume a similar amount of energy to televisions and STBs. CEE expects to work with members to collectively understand the rationale and promotional strategies for the new ENERGY STAR computer specification, which became effective on July 20, 2007.

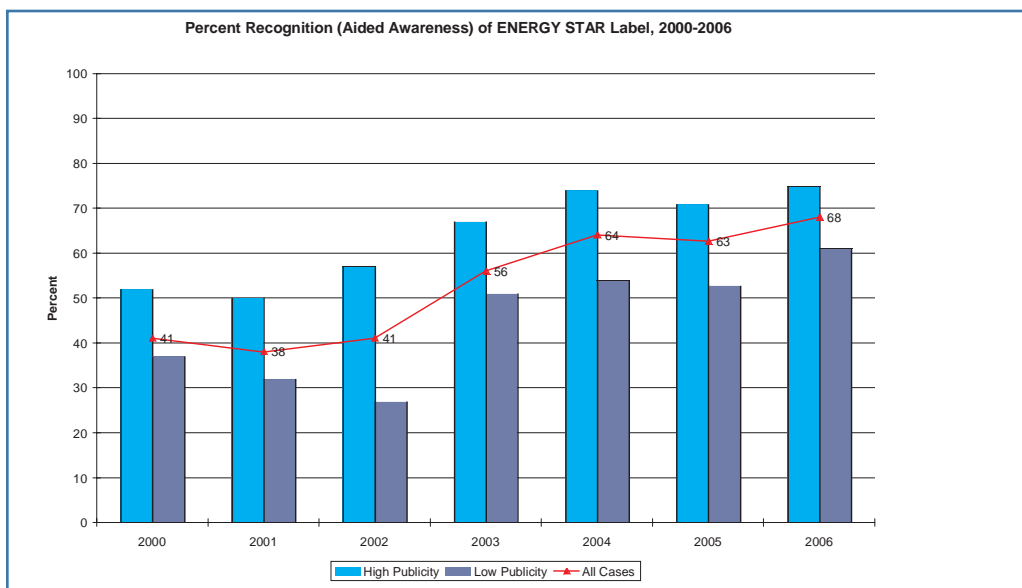
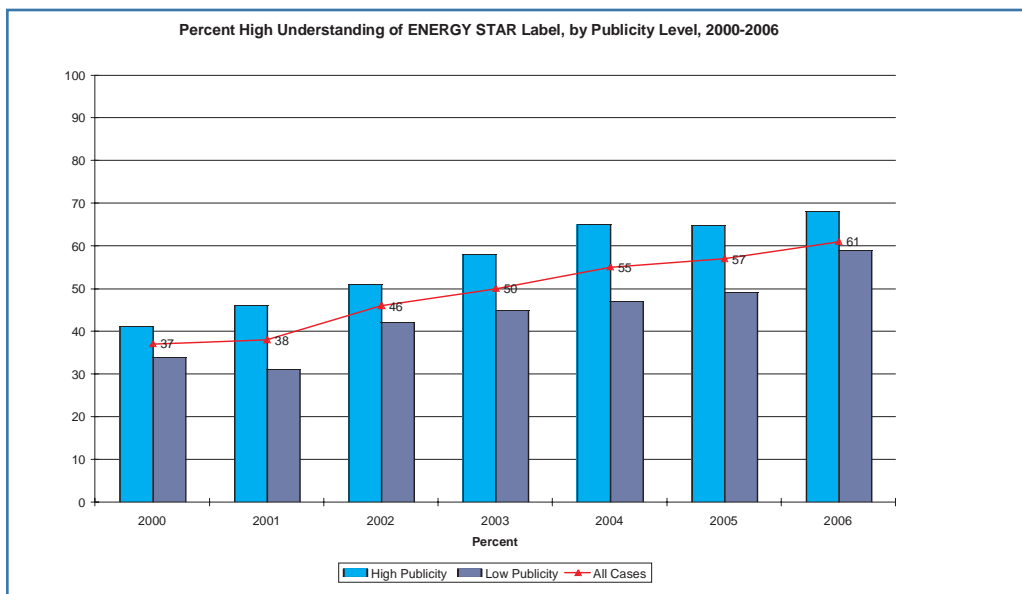
In addition to these three product areas, CEE has identified several other efficiency opportunities, including improving the efficiency of two component areas—internal and external power supplies—and reducing standby power use. Further, CEE has noted several trends such as home networking, power management, and electronics recycling that it will consider in its work.

Initiative efforts will be supported by the Consumer Electronics Committee, which will serve as a forum for sharing lessons learned about energy-efficient consumer electronics promotion and refining the initiative and suggesting changes. The Committee recently met to develop comments on draft ENERGY STAR television and STB specifications, and will re-convene in the coming months to continue work on these topics. If you would like to join the Committee, please contact Rebecca Foster (rfoster@cee1.org) or Margie Lynch (mlynch@cee1.org).

ENERGY STAR survey update

CEE's annual survey of household awareness of the ENERGY STAR label is slated to be sent to a randomly selected national sample of households in September of this year. Fourteen CEE members have generously offered to fund the 2007 survey. The survey is designed to produce results that can be generalized to the nation. It also accounts for the degree of ENERGY STAR publicity conducted in an area. As in previous years, EPA has offered to analyze and produce a report on the national-level data. The report should be available in spring 2008 and will be posted on the CEE website.

This fall, CEE plans to release a report demonstrating trends among major indicators of ENERGY STAR performance and brand equity from 2000 to 2006. This report will lay out in one document the year-over-year changes across the indicators as well as the rationale behind a number of the indicators. It will bring together information from the seven analyses of the data conducted by EPA and from conference papers and additional analysis of the data conducted by CEE staff. Look for the paper on the CEE website later this year.



In memoriam: Shel Feldman, 1936-2007

Shel Feldman, Ph.D., longtime energy-efficiency program evaluator who worked with CEE members over the years, passed away suddenly on July 15.

Feldman contributed to the energy-efficiency community in numerous ways, including many high-quality evaluation research articles and his leadership of the Wisconsin Center for Demand-Side Research (now the Energy Center of Wisconsin). He was also known for his vast knowledge of market research, energy-efficiency program evaluation, and measurement of behavior change.

Among his many accomplishments and activities, Feldman served as Co-Chair of the CEE Evaluation Committee from

2001 to 2004. Even after stepping down as Co-Chair, he continued to provide insight and wisdom to the CEE Evaluation Committee. Feldman was particularly instrumental in the redesign of CEE's ENERGY STAR survey in 2001. The quality of Feldman's work, as well as his thoughtfulness and generosity, benefited CEE and its members throughout the years. He will be greatly missed.

CEE members wishing to honor Feldman in some tangible way can make a contribution to the Shel and Eve Feldman Fund. The fund, administered by the International Energy Program Evaluation Conference, provides scholarships for students of energy-efficiency program evaluation. Contact Monica Nevius at CEE (mnevius@cee1.org) for details.

Board elects McLean-Conner Chair

On June 15, the CEE Board of Directors unanimously elected Penni McLean-Conner, Vice President of Customer Care for NSTAR Electric and Gas, as CEE's new Chair. For the past two years, McLean-Conner has served on the Executive Committee as Treasurer. "I'm honored to have been asked by my colleagues to lead our efficiency program industry's only U.S. and Canadian organization," she explained. "I am fully committed to leveraging CEE's unique position to deliver more energy saving opportunities to meet the growing needs of our voluntary electric and gas programs."



CEE Board Chair Penni McLean-Conner

Gene Rodrigues, Director of Energy Efficiency at Southern California Edison, who handed over the Chair's gavel to McLean-Conner, was recognized by the Board for his two years of service and leadership. Rodrigues will continue to serve as a Director.

The hard-working Nominations Committee—who verified all Directors' continuing interest, commitment, and availability to serve—also recommended the ascent of Rick Leuthauser, Director of Efficiency Services for MidAmerican Energy, to fill the Treasurer's position on the Executive Committee. Given the recent expansion of the Board, the Committee also recommended keeping the Board at its current size of 19 members and the reelection of the Directors. The Board endorsed the Committee's recommendations and asked the Committee to continue to examine

how the Board might be structured in the future to include perspectives from the growing number of members from regions not historically as well represented.

The Board also elected as non-voting Special Advisors, Kathleen Hogan, Director of Voluntary Partnerships for the Atmospheric Pollution Prevention Division of U.S. Environmental Protection Agency, and David Rodgers, Deputy Assistant Secretary for Efficiency of the Energy Efficiency and Renewable Energy Division of the U.S. Department of Energy. Rounding out the Executive Committee are Vice Chair David Goldstein, Energy Program Director at Natural Resources Defense Council, and Secretary Roland Risser, Director of Customer Energy Efficiency for the Pacific Gas & Electric Company.

Wal-Mart installs high-efficiency rooftop units in stores

Gas Committee explores next steps

Wal-Mart has teamed up with Lennox International to install high-efficiency HVAC systems that include gas/electric single package rooftop units providing both heating and cooling for their stores.

"Wal-Mart is using new industry-leading, high-efficiency packaged rooftop units in its stores," said James McClendon, Wal-Mart's Chief Mechanical Engineer. The units feature efficiencies above 12.0 EER, as well as advanced airflow operation. The units achieve a high level of efficiency during part-load operation, which accounts for a majority of its operating hours. The rooftop units exceed the highest ENERGY STAR and CEE efficiency specifications for high-efficiency commercial air conditioning. However, the gas heating side of these units use the standard technologies, with performance levels of approximately 80 percent AFUE.

"Most of the large retailers we work with purchase a tremendous amount of equipment and use an enormous amount of energy. As a result, they are hungry to install energy-efficient products and lower their energy expenditures," explained Mike Walker, Strategic Global Accounts Manager for Lennox International. "Any help that CEE can provide to justify the business case for using energy-efficient products is extremely beneficial."



The business case for high-efficiency cooling in these units has been made through CEE's High-Efficiency Commercial Air Conditioning Initiative. Now, CEE's Natural Gas Committee is exploring opportunities for increased gas efficiency on the heating side of these units. "For retailers to realize the full potential of energy savings in single package rooftop units, the next frontier is gas heating efficiency," said Michelle Rosier, CEE Natural Gas Program Manager. In September, CEE and industry partners will meet to discuss the economic and technological potential for improving gas heating efficiency in these units.

EPA and DOE seek CEE input on future of ENERGY STAR

Representatives of EPA and DOE presented future plans for ENERGY STAR at CEE's June meeting in Boston and encouraged CEE members to continue providing new ideas.

The ENERGY STAR Brand has achieved greater recognition than ever before (exceeding 60 percent). As the brand matures, the two federal agencies responsible for managing the Program—EPA and DOE—are exploring innovative ways to extend ENERGY STAR while protecting its equity. CEE is working with members to pilot the "Save More with ENERGY STAR" slogan, which is intended to target consumers interested in the most efficient products available, while improving member program cost-effectiveness. Preliminary results from these pilots are expected this fall.

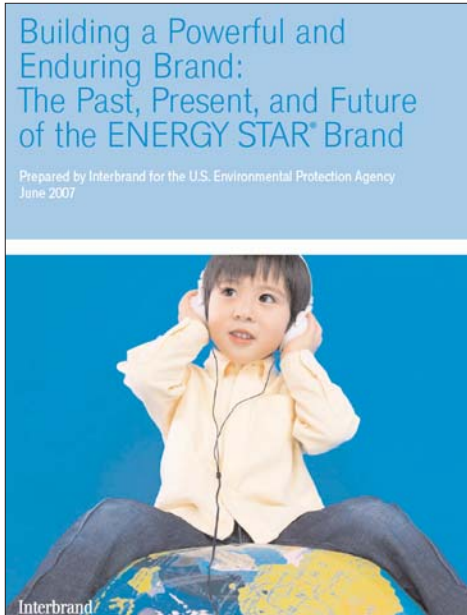
Peter Banwell of EPA and Rich Karney of DOE presented a summary of the ENERGY STAR programs that are being revised and shared possible areas for new programs (see table below). Banwell also highlighted a new report on ENERGY STAR by a leading brand management firm (InterBrand). The report, "Building a Powerful and Enduring Brand: the Past, Present and Future of the ENER-

GY STAR Brand," summarizes the fundamentals of brand management and concludes that ENERGY STAR brand scores well in terms of credibility, relevance, differentiation, and consistent communication. The complete report can be downloaded at http://www.energystar.gov/ia/partners/downloads/ENERGY_STARBrandManifest508.pdf.

In addition to DOE's program changes, Karney presented some new communications pieces being developed to support voluntary efficiency programs. These "Product Market Snapshots" will quickly apprise partners about the current state of the market for a particular product by highlighting key trends, energy savings potential, and the ENERGY STAR program strategy. Based on positive feedback on some pilot documents, DOE plans to add these reports to the ENERGY STAR website in the coming months.

Conveying CEE member input to ENERGY STAR

During an afternoon breakout session, CEE members in attendance had an opportunity to provide the two agencies with input on plans for 2008. Maria Vargas and Ann Bailey of EPA



presented a new Public Service Announcement that could be used by CEE members and also shared campaign plans for 2008. CEE will be working with its members to document feedback to submit to the two agencies this Fall. All presentations given by EPA and DOE are available on CEE's website. If you would like to contribute feedback on the direction of ENERGY STAR and/or participate in development of formal comments, please contact John Taylor (jtaylor@cee1.org).

ENERGY STAR changes for 2007 and 2008

Specification revisions	Proposed new specifications	Proposed for sunset
Appliances (room air conditioners, dishwashers, clothes washers, and refrigerators)	Advanced set-tops/digital video recorders (DVRs)	Exit signs
Compact fluorescent lights (CFLs)	Commercial dishwashers	Traffic signals
Commercial solid-door refrigerators/freezers	Commercial ice machines	Transformers
Computers	Digital TV adapters	
External power supplies (II)	Holiday lighting	
Furnaces	Packaged terminal air conditioners	
Imaging equipment	Solid-state lighting	
Programmable thermostats	Water heaters	
Roof products		
Televisions		
Windows/doors/skylights		

Full speed ahead on natural gas program

National opportunities and challenges for gas-efficiency programs are increasing, and CEE members are stepping up to address them. CEE has seen growth in the number of natural gas and combination members, and now has a fully-staffed team to help move issues forward.



“Natural gas utilities are facing an increasing need to provide energy-efficiency programs for their customers,” according to Bruce Johnson, Co-Chair of the Gas Committee and Director of Energy Management for KeySpan Energy Delivery. “CEE has recognized the opportunity to provide greater service to its members by creating a forum for discussing the challenges faced by gas-efficiency programs.” The expansion of the Commercial Kitchen Initiative to

several gas-powered technologies built momentum, and the outcomes of the Natural Gas DSM Summit, held last November in Dallas, provided direction to CEE’s efforts and growth in this area.

Over the past year, CEE has increased its staff dedicated to natural gas work to three full-time employees. The most recent to join the team is Michelle Rosier (see story on page 10). With this addition, CEE now has the capacity to address the opportunities identified by members as well as the ability to take on new challenges more rapidly. CEE Program Manager Eileen Eaton has worked partially with the gas team but now works in the residential sector full time.

Thus far in 2007, the gas team has been focusing on residential water heaters (see story below). It also has begun exploring opportunities to improve the gas furnace portion of rooftop, “gas-pack,” unitary HVAC systems. The recent CEE

Program Meeting in Boston gave members an opportunity to discuss progress on both these fronts.

One of the next committee priorities is exploration of natural gas savings opportunities in commercial HVAC. Gas program staff are working closely with the Residential and Commercial HVAC Committees to make sure efforts are integrated and complementary. During the coming months, CEE staff will complete the gas-pack research and begin work on exploring commercial boiler opportunities. The goals are to provide actionable information to our members on opportunities in commercial HVAC and lead market transformation efforts in these areas. For an example of an opportunity in this area, see “Walmart installs high-efficiency rooftop units in stores,” on page 6. For more information, please contact Kara Rodgers (krodgers@cee1.org).

Gas water heating initiative advances

The CEE Gas Committee has been discussing the development of a residential gas water heating initiative that would include both gas storage and gas tankless water heaters. Assuming that the initiative development process progresses smoothly, the committee is hopeful for Board authorization of an initiative in time for incorporation into 2008 programs.

CEE June Program Meeting

At the June Program Meeting, discussion focused in large part on what to include in a proposed water heater initiative. Members discussed potential specification levels for both tank-type and tankless water heaters as well as potential program approaches. To support an informed committee decision, CEE is researching market and cost-effectiveness components.

The goal is to have a draft initiative available for discussion at CEE’s Industry Partners Meeting September 25 and 26 in St. Louis, Mo. The water heater breakout session topics will seek to develop the aspects of the CEE initiative that focus on outreach to members of industry, building useful training sessions for plumbing contractors that include high-efficiency water heaters, and methods for reaching

out to consumers. “We’ve set a very aggressive timeline for the Gas Committee,” says Kara Rodgers, Senior Program Manager for Natural Gas at CEE, “but there’s a clear need for programs to support efficient water heaters due to increased interest at all levels.”

Related water heating developments

CEE attended the DOE ENERGY STAR Water Heater Stakeholder Meeting on June. DOE has released draft criteria for ENERGY STAR water heaters, and CEE has submitted comments on behalf of the committee. CEE’s comments support an ENERGY STAR program for water heaters, but with limits to protect brand integrity.



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CEE Board initiates new Data Centers and Servers Initiative

On June 15, the CEE Board of Directors approved a new Data Centers and Servers Initiative and a dedicated committee to pursue savings in this dynamic work area. With growing online transactions and national requirements for storing digital data, data centers and servers are already a significant energy end-use and are expected to represent over two percent of U.S. electricity consumption by 2011.

During the past six months, a CEE exploratory committee researched and identified energy-efficiency opportunities in data centers and servers. Their results indicate that opportunities in data centers, which can range from closet-sized rooms with one or two servers to football-sized facilities with hundreds or thousands of servers, are significant.

"Based on the committee's results, the CEE Board felt that the time

was right to establish a presence in this work area," said CEE Commercial Program Manager Jason Erwin. "Efficiency program administrators are eager to identify, understand, and develop data center program opportunities. Meanwhile, the industry is clearly trying to address their space and power challenges."

Operational enhancements alone, without significant capital improvements, can enable businesses to reduce energy consumption in their data centers by 10 percent or more. In addition, improving the performance and utilization of servers combined with enhanced cooling and facilities infrastructure can bolster savings even further.

One CEE member, the Pacific Gas & Electric Company, established its "High Tech Program" last year and is offering various incentives to local businesses to reduce data cen-

ter energy consumption. Several other CEE members and contributors on the exploratory committee may develop data center programs later this year.

CEE is working closely with ENERGY STAR and the high tech industry to develop voluntary server energy performance specifications and to explore other program strategies to mine the great energy savings potential in data centers. CEE will continue to work closely with ENERGY STAR on their server and data center initiatives, while monitoring industry developments.

A data centers and servers track will be featured at the CEE Industry Partner's Meeting on September 25 and 26 in St. Louis, Mo. For more information or to participate in the new Data Centers and Servers Committee, please contact Jason Erwin (jerwin@cee1.org).

NEMA releases state-level motor shipment data

The National Electrical Manufacturers Association (NEMA) recently released state-level shipment data for both NEMA Premium™ motors and motors that are not qualified for the NEMA Premium label to CEE members for the first time. The data are for 2005 shipments, and CEE expects to receive data for 2006 soon. With these data CEE members can now calculate market penetration of NEMA Premium motors at the state level.

That market penetration is calculable from the data is important for members' regulatory reporting, as is the ability to compare results for different states and regions. That NEMA and the manufacturers of NEMA Premium motors saw the importance of the data to the future of motors efficiency programs, and were able and willing to work through major concerns about maintaining manufacturer confidentiality with the release of the data, speaks to their commitment to energy efficiency. It also represents a strengthening relationship between CEE and industry associations. CEE hopes that the precedent set by NEMA in releasing these

data will be noticed by other industry associations and will give them confidence in working with CEE to release state-level market penetration data to CEE and its members.



The data show counts of shipments to motor distributors of non-OEM motors for six horsepower categories. While the data are from licensed manufacturers of NEMA Premium motors only, this represents the majority of motors manufacturers operating in or shipping to the United States. Most of the data are reported at the individual state level, but in some cases two or more states were aggregated in order

to protect manufacturer confidentiality. CEE members gave feedback to NEMA on the states to be aggregated.

NEMA has released the data to CEE for the use of our members only. CEE members are free to use the data for their analysis and reporting efforts, but not to publish or distribute the tables. For more information about the data or to inquire about obtaining a copy, contact Monica Nevius (mnevius@cee1.org).

Shedding light on solid-state lighting

At its June Program Meeting, CEE hosted Brad Koerner, Lighting Market Manager at Color Kinetics. Koerner addressed several myths associated with solid-state lighting (SSL) as part of a general session panel on emerging opportunities.

Before presenting the group with common misconceptions about LED performance, Koerner provided key background information. Generally, SSL technology is divided into two sub-categories: Light Emitting Diodes (LEDs) and Organic Light Emitting Diodes (OLEDs). The presentation focused on LEDs, as they are recognized as being the nearer-term application.

Koerner defined an LED as a small semiconductor diode device that converts electrical energy directly into a discrete color of light. LEDs use different compounds to produce different colors of light, and contrary to popular belief, are not a new technology. The LED was invented in 1962, and the first LEDs emitted a dim, red light. Additional colors emerged over time, with white LEDs coming out only in the late-1990s.

Speaking about the advantages of LEDs, Koerner noted their long life (leading to low maintenance costs) and relatively low power consumption. He also said they can be designed to avoid UV or IR light and that they are easily controllable.

In terms of myths, Koerner spoke about the claim that LEDs last forever. "In truth," he said, "they can last a long time, but their light does slowly fade over time. Their lifetime depends on the quality of the fixture design, how

hard the LED is driven, and the ambient temperature in which it operates."

The second myth that Koerner addressed is that LEDs generate no heat. He said they do generate heat on the back side of the LED. With today's sources, the amount generated is only about half as much as incandescent sources, but twice as much as fluorescent sources.

Third, Koerner clarified the myth that LED efficacy is rated like other light sources. "LED efficacy is rated by chip manufacturers in a laboratory under ideal, impractical conditions." Chip manufacturers test their products with millisecond "blink" tests at low temperatures with extremely high power. This approach produces an extremely high lumen/watt number, but once the LEDs are on for any length of time, they generate heat, which immediately lowers their output and efficacy.

Following the presentation, the Residential Lighting Committee met to discuss the presentation and identify

additional information needs about SSL. They agreed that more information about how the technology works and how current products are performing would be helpful. "We're working to bring members up to speed on this new technology so that they can evaluate when the time is right to begin programs for SSL products," said CEE Senior Program Manager Rebecca Foster. "A recent cooperative agreement with the Department of Energy is providing CEE with additional resources to undertake this work, and assist members in accurately informing their customers about the advantages and constraints of this emerging light source."



CEE welcomes new staff

CEE welcomes two new program staff members: Michelle Rosier and Margie Lynch.

Rosier joined CEE in June as part of the natural gas team. She has just completed her Master's in Public Policy at Harvard University's Kennedy School of Government where she specialized in regulatory and industry analysis of energy and the environment.

Previously, Rosier researched natural gas efficiency and potential incentive structures for the Northeast States Coordinated for Air Use Management (NESCAUM), and worked on air pollution and energy policy in Minnesota with the Sierra Club.



New CEE Program Managers Michelle Rosier (left) and Margie Lynch

She comes to CEE as a Gas Program Manager, and will be working primarily with commercial and residential space heating.

Lynch joined CEE in July and will be working with the residential team. As a Program Manager, she will focus primarily on consumer electronics, HVAC, and whole-house program initiatives.

Lynch has a law degree from Columbia University and has worked extensively in the environmental field, most recently as Director of Partnerships for the Massachusetts Department of Conservation and Recreation.

Recommendations for large motors approved

On June 15, the CEE Board of Directors approved a Guidance Specification for Large (250-500 hp), Low-Voltage, General Purpose Motors recommended by CEE's Motors and Motor Systems Committee. Effective immediately, this Guidance Specification provides performance, operating, and application information for members to consider when developing incentive programs for motors in this category.



CEE launched its Premium-Efficiency Motors Initiative in 1996 to address general-purpose, low-voltage motors from 1-200 hp. In 2001, CEE and the National Electrical Manufacturers Association (NEMA) agreed to promote a common set of specifications for these motors under the NEMA Premium™ brand. NEMA Premium also addresses motors that are not covered by the CEE Initiative, such as medium-voltage motors, special and definite purpose motors, and larger motors from 200-500 hp. The Guidance Specification expands the scope of motors covered by CEE's Premium-Efficiency Motors Initiative to more fully align with NEMA Premium. It provides a national platform for program administrators to consider NEMA Premium-efficiency levels in projects with larger motors.

While motors over 200 hp represent only one percent of all the motors in the industrial sector, they consume approximately 45 percent of the energy. One DOE study estimates potential energy savings of approximately 2.6 billion kWh annually through the installation of energy-efficient motors in the 250-500 hp range.

By expanding the scope of motors covered under the CEE's Premium-Efficiency Motors Initiative, the newly approved

Guidance Specification will help efficiency program administrators maximize large motor energy savings. While both the original Initiative and the new Guidance Specification align with the NEMA Premium efficiency levels for motors 1-500 hp, the CEE Motors Committee determined that additional considerations for large motors (250-500hp) were appropriate.

"Large motors are expensive and parameters such as duty cycle, loading factor, and operating hours can have a greater impact on overall efficiency than for smaller motors," explained CEE Industrial Program Manager Ilene Mason. "Given this greater variability in savings, it is prudent to consider large motors on a case-by-case basis."

Rather than simply recommending NEMA Premium, the most appropriate, high-efficiency motor is recommended based on engineering analysis. Any program incentives are then derived from the projected energy savings. The Guidance Specification highlights the opportunity for program administrators to achieve additional savings in applications where NEMA Premium motors are appropriate both technically and economically. It is intended to support consideration of NEMA Premium efficiency levels for large motor projects on a routine basis.

The Guidance Specification recommends incorporating "NEMA Premium" terminology in relevant program descriptions; educating in-house project development and evaluation teams about motor efficiency definitions and terminology, life-cycle costing of motors, and other relevant information; and extending the educational effort to others outside the organization who routinely submit custom projects. The Guidance Specification also provides reference information to help members establish appropriate efficiency baselines for motors in this size range.

For additional information, please contact Ilene Mason (imason@cee1.org).

Gas water heating initiative advances

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Over the last few months the CEE Tankless Water Heating Subcommittee has been designing a voluntary Tankless Water Heater Field Testing Protocol for members. The protocol enables standardized comparison of performance, in-field efficiencies, and usage behavior differences of residential tank-type and tankless gas-fired water heaters. It will act as a guideline and common reference point for member program administrators who field test residential customers. Demographic and behavioral information will be captured with pre- and post-field testing homeowner

surveys. A testing procedure for in-field monitoring of energy usage and performance for both the tank-type and tankless water heaters also is being developed with support from the American Society of Heating, Refrigerating, and Technical Engineers (ASHRAE) Technical Committee 6.6. CEE is proposing to have the protocol available by October to allow members to begin field testing in 2008. Data from these field tests will ultimately help utility program administrators determine how best to support gas-fired tankless water heaters in their programs.

CEE will highlight programs at NAFEM Show



As part of CEE's work in furthering industry relationships in the food service sector, CEE will be attending the October North American Association of Food Equipment Manufacturers (NAFEM) Show in Atlanta, Ga. NAFEM's biennial trade show attracts approximately 20,000 foodservice professionals and features more than 600 North American manufacturers (www.nafem.org).

CEE will be using this opportunity to interact with the industry, to highlight member commercial kitchens program efforts across North America, and to discuss the rising importance of energy- and water-efficient appliances and practices. For more information on the NAFEM show or the CEE Commercial Kitchens Initiative, please contact Afroz Khan (akhan@cee1.org).