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November Dinner Meeting

*Tuesday, November 24th, 5:30PM-8:30PM: ASHRAE NY Dinner meeting
Legends, [6 West 33rd street, New York, NY](#)*

Topic: Energy Efficiency in Supermarkets

The presentation will discuss the potential for improving the energy efficiency of supermarkets and talk about computer simulation tools that can be used to evaluate potential improvements. Various case study examples will be presented and discussed for various efficiency improvements including:

- *CHP application for supermarkets*
 - *Evaporative condensers*
 - *Floating head pressure*

- *Mechanical subcooling*
- *Suction pressure reset*

Speaker: Hugh Henderson 1.0 PDH credits available.

Mr. Henderson is a founding Principal at CDH Energy Corp, in Cazenovia, NY. CDH Energy is a consulting firm that specializes in evaluating new energy technologies. He has collected detailed field-monitored data and developed building simulation tools to evaluate a wide range of energy-efficient technologies for residential, commercial and industrial applications.

Mr. Henderson is an active member of several ASHRAE Committees at the Society Level. He is currently a member of the Research Administration Committee (RAC) and chairs the Research Planning Subcommittee (RPS). He is also a board member of the Syracuse Center of Excellence for Environmental and Energy Systems. Mr. Henderson formerly worked at the Fleming Group, the Florida Solar Energy Center, and United Technologies Carrier. He holds Bachelors and Masters of Science Degrees in Agricultural/Mechanical Engineering from Cornell University. He is a Professional Engineer in Florida.

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PRESIDENTS MESSAGE BY KEVIN GALLEN, PE, LEED AP

The October chapter meeting was a success! It was well attended and had a busy lineup of speakers. See separate article summarizing the meeting. Among other things, Spencer Morasch, the Director and Regional Chair of ASHRAE Region 1 (New England, NY and NJ) visited the chapter and spoke to the group. He presented an award to the chapter for their participation in the recent CRC - New York had the most "people miles" at the CRC, and received the Golden Boots award. My thanks to those who attended from the NY Chapter: Om Taneja, Kevin Gallen, Monica Perl, Meraj Ramnarine, Ernest Gallo, Alexander Weiss, Steven Baumgartner, Brian Ryglewicz, Christopher Moore, Lou Rugulo, Gene Geyer, Dick Batherman, Anoosh Tirabady, Leanora Paniccia, Bill Lau and Brian Azara (If I neglected to mention anyone - my apologies).

Our chapter is only as good as our membership. As of now, we have many members assigned to our chapter, but not all of them have paid their chapter dues. Even fewer attend our events. Fewer still provide the board of governors with feedback, or decide to actually vote when asked to. Check out our website (<http://www.ashraeny.org/>)! Come to our events! Get involved in committees! Start your own committees! Give us suggestions! Talk to me! The one thing I do not want from this year is to have a stagnant chapter.

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ASHRAE EDUCATION

Advance Your Career - Building Energy Modeling Professional Certification

ASHRAE will launch its newest certification program, Building Energy Modeling Professional (BEMP), with a special pencil-and-paper administration on January 27, 2010 in conjunction with the ASHRAE Winter Conference and AHR Expo in Orlando, FL.

There will be no on-site registration!

The BEMP certification program assesses an individual's ability to evaluate, choose, use, calibrate, and interpret the results of energy modeling software for building and systems energy performance. The certification was developed in collaboration with the U.S. affiliate of the International Building Performance Simulation Association (IBPSA-USA) and the Illuminating Engineering Society of North America (IESNA).

To earn the certification, you must submit an application indicating how you meet eligibility criteria and, obtain application approval, and pass a 115-item examination.

To get started, download and read the [BEMP candidate guidebook](#). The guidebook contains important information about eligibility requirements and other aspects of the exam, and complete the [BEMP application form](#).

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ASHRAE Government Affairs Update, 10/09/09

Welcome to ASHRAE's Government Affairs Update. Along with the Government Affairs webpage, these periodic e-mail updates feature information on government affairs related activities of interest to ASHRAE members and others interested in the built environment. Archives of previous updates are available from the government affairs webpage (<http://www.ashrae.org/advocacy>).

Please pass this information on to interested colleagues who also may subscribe from the ASHRAE Government Affairs webpage. Should you wish to unsubscribe, information appears at the end of this e-mail.

If you have any recommendations regarding content, or have questions about or would like to participate in Washington Office activities, please contact ASHRAE Government Affairs staff at (202) 833-1830 or washdc@ashrae.org.

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California Accelerates its Pursuit of Clean Energy

California's commitment to renewable energy and energy efficiency got two major boosts recently. For renewable energy, Governor Arnold Schwarzenegger signed an executive order on September 15, requiring the state's utilities to get a third of their electricity from renewable energy sources by 2020. The state currently has a 20% renewable power requirement by 2010 for investor-owned utilities only, but the executive order extends and increases that mandate, while also expanding it to include public power utilities and other electricity providers. The governor's directive calls for the California Air Resources Board to adopt new regulations to implement the renewable mandate by July 31, 2010. Three years ago, Governor Schwarzenegger signed a bill to achieve a 25% cut in statewide greenhouse gas emissions by 2020, and the new renewable energy requirement will help to meet that goal. See the governor's press release (<http://gov.ca.gov/press-release/13273/>).

While making a substantial commitment to renewable energy, the state has also launched the largest investment in energy efficiency ever made by a state. On September 24, the California Public Utilities Commission (CPUC) approved a \$3.1 billion slate of ratepayer-supported energy efficiency programs for 2010-2012. The effort will be administered by California's investor-owned utilities, including Southern California Edison, Pacific Gas and Electric Company, San Diego Gas and Electric Company, and the Southern California Gas Company. One benefit cited by CPUC is the launching of the nation's largest home retrofit program. Under the California Statewide Program for Residential Energy Efficiency, the state aims to achieve a 20% energy savings for up to 130,000 homes over a three-year span.

The CPUC will also provide \$175 million to encourage the construction of net zero energy homes and commercial buildings. That portion of the funding will help with design assistance, incentives for new buildings that exceed the state's energy code, and research and demonstration of new energy technologies. In addition, the CPUC program sets aside \$260 million in funds for 64 cities, counties, and regional agencies, targeting retrofits of public buildings as well as leading-edge energy efficiency opportunities. See the CPUC press release (http://docs.cpuc.ca.gov/PUBLISHED/NEWS_RELEASE/107424.htm).

DOE Delivers \$106 Million for Energy Efficiency in Nine States

DOE delivered more than \$106 million in American Recovery and Reinvestment Act funds on September 24 to nine states to support energy efficiency and conservation activities. Under DOE's Energy Efficiency and Conservation Block Grant (EECBG) program, the nine states will implement programs that lower energy use, reduce carbon pollution, and create green jobs locally. States receiving funding are Delaware, Hawaii, Indiana, Iowa, Massachusetts, Oklahoma, Tennessee, Vermont, and Virginia.

Projects eligible for support include the development of an energy efficiency and conservation strategy, energy efficiency audits and retrofits, transportation programs, the creation of financial incentive programs for energy efficiency improvements, the development and implementation of advanced building codes and inspections, and the installation of renewable energy technologies on municipal buildings. For example, Massachusetts will use a portion of the \$14.75 million for to help share its Energy Information Reporting System with each of the commonwealth's 351 local government units, enabling them to establish energy-use baseline inventories for their buildings, vehicles, and street lights. And Hawaii will focus a substantial part of its \$9.59 million on upgrading the state's existing buildings to meet Energy Star standards. For a full list of awards to date, visit the Energy Efficiency and Conservation Block Grants Program (<http://www.eecbg.energy.gov/>). Read the DOE press release (<http://www.energy.gov/news2009/8076.htm>).

HUD Grants \$300 million in Recovery Act Funds for Green Housing

The U.S. Department of Housing and Urban Development (HUD) awarded \$300 million in American Recovery and Reinvestment Act competitive grants on September 18. The grants will allow 36 public housing authorities across the United States to create energy efficient communities through the substantial rehabilitation of existing public housing developments or through the construction of new ones. Housing authorities in 24 states, plus the District of Columbia, will receive the HUD funding. The goal is to create public housing that conserves energy and encourages more healthy lifestyles.

Overall, \$600 million in Recovery Act funds will go towards creating public housing communities that achieve improved environmental performance through such measures as meeting Energy Star standards for new construction and using renewable energy resources. The funding is designed to help reduce energy use, generate energy savings for housing authorities and their residents, and reduce greenhouse gas emissions. HUD is expected to award the remaining funds in the coming weeks. See the HUD press release (http://portal.hud.gov/portal/page/portal/HUD/press/press_releases_media_advisories/HUDNo.09-178/HUD%20No.%2009-178.doc).

EPA Identifies Alternatives to ODSs

The U.S. Environmental Protection Agency (EPA) issued a Determination of Acceptability that expands the list of acceptable substitutes for ozone-depleting substances under the Significant New Alternatives Policy (SNAP) program. The determinations concern new substitutes for use in the refrigeration and air conditioning and foam blowing sectors.

R-744 (CO₂)--EPA's decision: R-744 (carbon dioxide or CO₂) is acceptable for use in new equipment as a substitute for chlorofluorocarbon (CFC)-12, R-502, hydrochlorofluorocarbon (HCFC)-22 and HCFC blends in:

- Retail food refrigeration.
- Cold storage warehouses.

C6-Perfluoroketone--EPA's decision: C6-perfluoroketone is acceptable as a substitute for CFC-113 for use in new and retrofit equipment in non-mechanical heat transfer.

R-438A (ISCEONR MO99)--DuPont Fluoroproducts has notified EPA that it is using the name DuPont TMISCEONR MO99 in marketing the refrigerant blend that EPA reviewed under the name "KDD5". On October 4, 2007 (72 FR 56628), EPA found KDD5 acceptable as a substitute for HCFC-22 for a variety of end-uses.

For a copy of the Federal Register Notice which also includes alternatives for foam-blowing applications, see <http://edocket.access.gpo.gov/2009/pdf/E9-23470.pdf>.

President Obama Orders Federal Agencies to Trim Greenhouse Gases

President Obama signed an executive order on October 5 that sets sustainability goals for federal agencies and focuses on making improvements in their environmental, energy, and economic performance. The Executive Order requires federal agencies to set a greenhouse gas emissions reduction target for 2020 within 90 days. It also requires federal agencies to increase their energy efficiency, reduce the petroleum consumption of their fleets, conserve water, reduce waste, support sustainable communities, and leverage their federal purchasing power to promote environmentally-responsible products and technologies. The new Executive Order makes reducing greenhouse gas emissions a priority for the federal government, which occupies nearly 500,000 buildings, operates more than 600,000 vehicles, employs more than 1.8 million civilians, and purchases more than \$500 billion per year in goods and services.

In his order, President Obama requires agencies to meet a number of energy, water, and waste reduction targets, including reducing their vehicle fleet petroleum use by 30% by 2020; beginning in 2020, designing all new federal buildings to achieve net-zero energy use by 2030; improving their water efficiency by 26% by 2020; minimizing their buildings' impacts on storm water runoff; recycling or diverting 50% of their waste by 2015; and meeting sustainability requirements in 95% of all applicable contracts. Within 180 days of the order, the federal government will also develop guidance for locating federal buildings in a manner consistent with sustainable development. See the White House press release (http://www.whitehouse.gov/the_press_office/President-Obama-signs-an-Executive-Order-Focused-on-Federal-Leadership-in-Environmental-Energy-and-Economic-Performance/%20) and the Executive Order (http://www.whitehouse.gov/assets/documents/2009fedleader_eo_rel.pdf).

20 Solar Homes Take Shape on the National Mall

The assembly of 20 solar homes on the National Mall in Washington, D.C., is rapidly approaching completion, as the 2009 Solar Decathlon prepares to open, free to the public, on October 9th. The Solar Decathlon is an international event in which DOE challenges university teams to design and build homes that run entirely on

solar energy. The teams ship their partially constructed homes to the National Mall, assemble them, and then compete in ten contests. This year, the 20 teams came from universities in Arizona, California, Illinois, Iowa, Kentucky, Louisiana, Massachusetts, Minnesota, Missouri, New York, Ohio, Pennsylvania, Texas, Virginia, and Wisconsin, as well as Puerto Rico, Canada, Germany, and Spain. Trucks rolled onto the National Mall just after midnight on the morning of October 1, and since then, the teams have been steadily working to assemble their solar homes. See the DOE press release (<http://www.energy.gov/news2009/8097.htm%20>) and the Solar Decathlon Web site (<http://www.solardecathlon.org/>).

This is the fourth running of the Solar Decathlon, and for the first time, the competition features a stand-alone electrical microgrid to which each team will have to connect their home. Starting on October 8, each home will be monitored for its performance in five areas relating to performance and livability: comfort (maintaining comfortable temperature and humidity in the home), hot water (producing a sufficient quantity at a high enough temperature), appliances (such as keeping refrigerated items at the right temperature), home entertainment (running a television, computer, lights, and other devices), and net metering. For the net metering competition, homes must use zero net energy over the course of a week, and teams receive a bonus for producing more energy than their home consumes. Other contests rate the teams for their communications with the public and for the architecture, engineering, and market viability of their homes. The overall winner will be announced on October 16. See the Solar Decathlon's Contests and Scoring page (http://www.solardecathlon.org/contests_scoring.cfm).

DOE is the primary sponsor of the 2009 Solar Decathlon, which is also sponsored and managed by DOE's National Renewable Energy Laboratory. Homes will open to the public beginning on October 9, and will be open for tours weekdays from 11 a.m. to 3 p.m., and from 10 a.m. to 5 p.m. on weekends, through October 18 (with the exception of October 14).

EIA Forecasts Lower Heating Bills this Winter

The average U.S. household will spend \$960 for space heating during this winter's heating season, marking an 8% decrease from last year, according to DOE's Energy Information Administration (EIA). The EIA's "Short-Term Energy Outlook," released on October 6, attributes most of the savings to lower fuel prices, particularly for natural gas, which is experiencing a slump in prices due to a growing supply that currently exceeds the demand. The EIA expects natural gas inventories to reach a record high of more than 3.8 trillion cubic feet by the end of October. Propane is produced during natural gas processing, so propane inventories are also higher than normal. As a result, households heated with these fuels will achieve the greatest savings this winter, with natural gas users seeing a 12% decline in winter heating bills and propane users seeing a 14% decline. Those using heating oil or electricity are projected to experience more modest declines of about 2% from last year. The EIA defines the winter heating season as running from October 1 to March 31 of the following year. See the EIA press release (<http://www.eia.doe.gov/neic/press/press327.html>) and the "Short-Term Energy Outlook" (<http://www.eia.doe.gov/emeu/steo/pub/contents.html>).

The EIA has also increased its projected drop in energy-related carbon dioxide emissions for 2009. Back in August, when the EIA started projecting annual energy-related carbon dioxide emissions, it forecast a 5% drop in 2009, while the current "Short-Term Energy Outlook" forecasts a 5.9% drop for the year. A number of factors contributed to the projected decline, including an increased use of renewable energy, the substitution of natural gas for coal in electric power plants, a decrease in industrial demand for coal, less natural gas use in industry and buildings, and a drop in demand for jet fuel, diesel fuel, and heating oil. Coal experienced the biggest drop in demand, at 10.1%, accounting for 63% of the drop in energy-related carbon dioxide emissions. U.S. greenhouse gas emissions are dominated by energy-related carbon dioxide emissions, so the decline in the latter would generally suggest an overall lowering of U.S. greenhouse gas emissions. See the EIA press release (<http://www.eia.doe.gov/neic/press/press328.html%20>) and the EIA supplemental report, "Understanding the Decline in CO2 Emissions in 2009" (http://www.eia.doe.gov/emeu/steo/pub/special/2009_sp_06.html).

President Obama Declares October National Energy Awareness Month

A more prosperous future for our Nation's economy means making investments in energy efficiency and clean energy today. Well-funded energy research and development will not only help protect our environment and support our communities, but it will also address concerns of global competitiveness and national security. Innovation in energy technology will decrease our oil use, strengthen our economy, and reduce the dangerous pollution that causes climate change.

As American scientists, engineers, and entrepreneurs bring new and improved energy technologies to homes and businesses in this country and around the world, they will be showing American leadership and vision while also making clean energy the profitable kind of energy. During National Energy Awareness Month, we recognize the contributions of individuals, organizations, and companies that are committed to advancing energy innovation and efficiency, and we promote the importance of a clean energy economy to our Nation.

The Federal Government is the largest consumer of energy in the United States, and my Administration is committed to leading by example in the use of clean energy and increased energy efficiency. Not only will we lead through our performance, we will also leverage our ability to be the kind of customer that can help turn an idea into a great American enterprise. Through State and local grants, increased funding for weatherization programs, job training programs, and policies to support clean energy businesses, we are ushering in a new era of green energy that will benefit our economic recovery, our security, and our long-term prosperity.

We face a turning point in our Nation's energy policy. We can either remain the world's leading importer of oil, or we can become the world's leading exporter of clean energy technology. We can allow climate change to wreak unnatural havoc, or we can create jobs deploying low-carbon technologies to prevent its worst effects.

Throughout our history, Americans have successfully confronted challenges that have tested our determination and our capacity to change. If we are to advance energy and climate security, we must focus on energy efficiency, promote sustainable industries, accelerate job training and job creation in these areas, and set effective and achievable standards for the generation and use of clean energy. As a Nation, we will lead by innovating, adapting to the global marketplace, and investing in the kind of sustainable future we want for the generations to come.

NOW, THEREFORE, I, BARACK OBAMA, President of the United States of America, by virtue of the authority vested in me by the Constitution and the laws of the United States, do hereby proclaim October 2009 as National Energy Awareness Month. I call upon the people of the United States to mark this month by making clean energy choices that can both rebuild our economy and make it more sustainable. IN WITNESS WHEREOF, I have hereunto set my hand this second day of October, in the year of our Lord two thousand nine, and of the Independence of the United States of America the two hundred and thirty-fourth.

DOE Announces \$87 Million in Funding to Support Solar Energy Technologies

At the opening of the Solar Decathlon on the National Mall, Energy Secretary Steven Chu announced up to \$87 million will be made available to support the development of new solar energy technologies and the rapid deployment of available carbon-free solar energy systems. Of this funding, \$50 million comes from the American Recovery and Reinvestment Act. The 47 projects with universities, electric power utilities, DOE's national laboratories, and local governments have been selected to support use of solar technologies in U.S. cities, help address technical challenges, ensure reliable connectivity with the electrical grid, and train a new generation of solar workers to install and maintain solar energy systems. These projects will help speed adoption of solar energy nationwide, while supporting development of a skilled workforce, and continuing to pursue new scientific breakthroughs to increase the efficiency and lower the cost of solar technologies.

The selected projects will help accelerate the commercialization of solar technologies in an effort to achieve

cost-competitive solar electricity by 2015, in addition to developing advanced solar technologies for the future. Projects focus on both technology improvements and the elimination of market barriers to help make solar electricity accessible to a wide variety of consumers.

The projects selected for negotiation of awards are in four categories:

- **High Penetration Solar Deployment.** Seven projects will model, test, and evaluate the impact of large amounts of photovoltaic (PV) electricity on the reliability and stability of the electric power system. These projects will help pave the way for broader adoption and growth of grid-tied solar energy systems by improving understanding of the impact of PV electricity on the grid.
- **Solar America Cities Special Projects.** As the load centers of energy use across the nation, cities play a strategic role in accelerating solar technology adoption at the local level. Sixteen cities have been selected for projects that will address specific barriers to solar adoption in urban settings and support innovative approaches that can be widely replicated. Many cities will use this funding for multiple efforts.
- **Solar Installer Training.** Nine colleges, universities, and local organizations have been selected to lead regional solar installation "train-the-trainer" programs. The projects will support a national ramp-up and coordinated network of training programs. This funding will help address the critical needs for qualified solar energy system installers.
- **Research projects at DOE national laboratories.** Fifteen projects at DOE national laboratories will seek to improve technologies, devices, and processes for both the PV and Concentrating Solar Power (CSP) industry. PV projects focus on development of next generation devices and processes, as well as supply chain technologies for the entire PV system. CSP projects focus on improved energy storage technologies to enable consistent and reliable energy generation.

For a more information about the Solar Energy Technologies Program and a list of selections, please visit the Solar Energy Technologies Program Web site (<http://www.solar.energy.gov/>).

DOE to Strengthen Enforcement of Product Energy Efficiency Standards

DOE announced three new steps to strengthen its ability to enforce energy efficiency standards. DOE has formed a new enforcement team within the Office of the General Counsel; established a program to randomly review manufacturers' compliance with DOE certification requirements; and is publishing guidance that provides further details about DOE's energy efficiency enforcement regulations.

In its new guidance, DOE confirms that under existing regulations, it can take enforcement action and assess civil penalties if a manufacturer fails to properly certify a covered product and retain records. Specifically, the agency clarifies that any failure to certify covered products according to DOE's rules violates the Energy Policy Conservation Act of 1975 and DOE regulations. DOE will randomly select previously filed certification reports for review, request certification records as needed, and hold manufacturers accountable for failing to certify covered products according to DOE rules.

These new steps are part of the DOE's ongoing effort to save energy for U.S. residents and businesses by clearing the backlog of energy efficiency standards for appliances and aggressively enforcing energy efficiency standards. This summer, DOE initiated investigations of alleged violations against both an air conditioner manufacturer and a freezer manufacturer. Both investigations are expected to be concluded shortly. See the DOE press release (<http://www.energy.gov/news2009/8129.htm>).

DOE Resource to Help Local Governments Expand Solar Energy

The U.S. Department of Energy announced the availability of a new online resource for local governments that assists community leaders and local stakeholders in building sustainable local solar markets. The online

publication, *Solar Powering Your Community: A Guide for Local Governments*, provides local governments with proven best practices enabling them to drive economic development, support clean energy jobs, and reduce carbon emissions by building a robust local solar market.

The publication outlines best practices and lessons learned from 25 Solar America Cities and other local governments across the nation that have successfully increased solar energy use in their communities. It also describes the country's most innovative solar programs and policies, explains the benefits, provides implementation tips, and includes brief case studies.

The best practices outlined in the Guide have been designed to meet the needs of local governments from small municipalities to large counties and metropolitan centers in diverse geographic areas. Topics included in the Guide include: strategies for solar initiatives, incentives, updating and enforcing local rules and regulations, engaging utilities, creative solar jobs and supporting economic development, outreach and education, and leading by example by installing solar on government buildings.

Solar Powering Your Community: A Guide for Local Governments is available on the Solar America Cities Web site (<http://www.solaramericacities.energy.gov/GuideForLocalGovernments>).

Vice President Biden Unveils Home Retrofit Plan for Energy Efficiency

Vice President Biden released on October 19 the "Recovery Through Retrofit" report, which lays out a plan to help U.S. residents upgrade the energy efficiencies of their homes. The scheme aims to increase green jobs and save energy through residential retrofits. At the same time, DOE issued a solicitation that offers \$454 million in American Recovery and Reinvestment Act funds-including \$390 million for a "Retrofit Ramp-Up" program-to support energy efficiency efforts throughout the country.

At a Middle Class Task Force meeting earlier this year, the vice president asked the White House Council on Environmental Quality (CEQ) to develop a proposal for federal action to lay the groundwork for a self-sustaining industry for home energy efficiency retrofits. Their response comes in the October 19 report and includes these federal recommendations: provide U.S. homeowners with home energy retrofit information, including an energy performance label for existing homes; get past cost barriers by making financing more accessible, including long-term municipal loans repaid through the owners' property tax bills, a concept known as Property Assessed Clean Energy (PACE); and establish national workforce certifications and training standards, creating a uniform set of national standards to qualify workers for energy efficiency retrofits. See the Recovery Through Retrofit report (http://www.whitehouse.gov/assets/documents/Recovery_Through_Retrofit_Final_Report.pdf).

DOE's new solicitation will support the retrofit objectives with a series of "Retrofit Ramp-up" awards, ranging from \$5 to \$75 million, for states, local governments, and Indian tribes. DOE seeks innovative programs that are highly leveraged, are broadly replicable and scalable, can achieve cost savings when scaled up, and are likely to be self-sustaining beyond the funding period. The programs should achieve high-quality retrofits for a large fraction of the buildings within entire neighborhoods and communities, and they can include PACE programs and programs that employ Home Performance with Energy Star, a national program from DOE and the U.S. Environmental Protection Agency. DOE also offered \$64 million in energy efficiency grants for local governments and state-recognized Indian tribes that are not eligible for direct funding under DOE's Energy Efficiency and Conservation Block Grant Program. Applications are due on December 14. See the DOE press release (<http://www.energy.gov/news2009/8148.htm>) and download the full solicitation (<http://www.eecbg.energy.gov/Downloads/EECBGCompetitiveFOA148MON.pdf>).

Team Germany Wins the 2009 Solar Decathlon

Team Germany took top honors in the 2009 Solar Decathlon, followed by the University of Illinois at

Champaign-Urbana in second place, and Team California in third. The winners were announced on October 16 by DOE Deputy Secretary Daniel Poneman at the competition site on the National Mall in Washington, D.C.

Team Germany-students from Darmstadt, Germany, whose team had won the previous Solar Decathlon in 2007-again triumphed by designing, building, and operating the most efficient solar-powered home among 20 university-led entries. Team Germany's winning "Cube House" produced a surplus of power despite three days of rain during the two-week contest. The 2009 Solar Decathlon challenged 20 teams from across the United States, as well as from Germany, Spain, and Canada, to compete in 10 contests, most of which related to the design and energy performance of the teams' solar homes.

Of those ten contests, Team Germany's surplus power production earned the Net Metering award, which carried the greatest weight at 150 points. Team Germany also won the Comfort Zone contest for 100 points by best maintaining a comfortable temperature and humidity in their home. Coming in second place overall, the University of Illinois took top honors in the Appliances contest, which involved running a refrigerator and freezer, dishwasher, washer, and dryer; the Hot Water contest, which required producing enough hot water for regular showers; and the Home Entertainment contest, which involved not only running a television, computer, lights, and a cooking appliance, but also hosting two dinner parties and a movie night, which were rated by their fellow contestants. And although the team didn't place in the top three, the University of Minnesota claimed the top spot in two juried design contests: Lighting Design and Engineering. The Engineering award honors the solar home that best exemplified excellence in energy systems design, savings, innovations, and reliability.

The Solar Decathlon concluded on Sunday, October 18, after which the teams started partially disassembling the homes and shipping them back to their places of origin. And although the 2009 Solar Decathlon has just ended, the application process for the next Solar Decathlon, to be held in fall 2011, has already begun. The Request for Proposals (RFP) for the 2011 Solar Decathlon is available on the Solar Decathlon Web site, and technical questions on the RFP will be accepted until October 22. Applications are due by November 17, and the selected teams will be notified by December 18. See the DOE press release (<http://www.energy.gov/news2009/8143.htm>), the Solar Decathlon Web site (<http://www.solardecathlon.org/>), and the RFP (http://www.solardecathlon.org/pdfs/2011_rfp.pdf).

ASHRAE was pleased to serve as a sponsor of the Decathlon.

California Expands Rules for Feed-In Tariffs and Net Metering

California is seeking to encourage utility customers to feed power into the grid from their renewable energy systems with two legislative bills signed by Governor Arnold Schwarzenegger. The first bill expands California's "feed-in tariff," under which large utilities have to pay their customers for the power they produce and "feed in" to the grid, at standard rates or "tariffs" that are adjusted to account for the time when the power is produced. Power produced during times of peak demand earns the highest rate. The new law doubles the maximum system size from the current 1.5 megawatts to 3 megawatts and requires long-term agreements that will be in effect for 10 to 20 years. It also increases the statewide cap for such feed-in tariff agreements to 750 megawatts, up from 500 megawatts. Utilities buying power under the feed-in tariff will be able to take credit for the renewable energy under the state's Renewable Portfolio Standard (RPS), which requires utilities to draw on renewable energy for one third of their power needs by 2020. See the feed-in tariff bill (http://www.leginfo.ca.gov/pub/09-10/bill/sen/sb_0001-0050/sb_32_bill_20091011_chaptered.html) and the summary from DSIRE, the Database of State Incentives for Renewables & Efficiency (http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=CA167F&re=1&ee=1).

Utility customers that are not interested in such long-term agreements, or who want to take advantage of incentives that are prohibited under the feed-in tariff, are more likely to opt for "net metering," which allows customers to carry forward a credit on any month when they generate more power than they use. Currently, any credit for net power generation is lost at the end of the year, but the state's new net metering law will give customers the option of either rolling over credits from year to year or selling the excess power to their utility at

a predetermined rate. In turn, the utility can take credit for that power under the state's RPS. The new law goes into effect on January 2011, after the California Public Utilities Commission sets the compensation rates. Both laws are aimed at helping utilities meet the RPS while encouraging utility customers to install renewable energy systems. See the net metering bill (http://www.leginfo.ca.gov/pub/09-10/bill/asm/ab_0901-0950/ab_920_bill_20091011_chaptered.html) and the summary from DSIRE (http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=CA02R&re=1&ee=1).

Report Examines Hidden Health and Environmental Costs of Energy Use

The energy you use to heat and cool your home, power your electric devices and appliances, and fuel your car may seem expensive enough already, but according to a new report from the National Research Council (NRC), there are plenty of health and environmental costs that aren't reflected in your energy bills. Quantifying mainly the health effects from the major air pollutants-sulfur dioxide, nitrogen oxides, ozone, and particulates-the NRC report estimated such "external" costs at \$120 billion for the United States in 2005. More than half of that cost is attributed to the nation's 406 coal-fired power plants, with only 10% of those plants accounting for 43% of those damages. The other big offender is motor vehicles, which caused an estimated \$56 billion in damages in 2005.

The NRC committee declined to tackle some of the more nebulous costs of energy production and use, including harm to ecosystems; risks to national security; effects of other pollutants, such as mercury; and climate change. The report does note that coal-fired power plants are the single largest source of greenhouse gases in the United States. And while the committee didn't place a precise cost on climate change, it noted that climate-related damages caused by each ton of carbon dioxide will be far greater in 2030 than they are now. The committee estimated that if the total amount of greenhouse gas emissions remains steady, the damages caused by each ton of carbon dioxide will increase 50%-80% by 2030. See the National Academies press release (<http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=12794>) and the full report (http://www.nap.edu/catalog.php?record_id=12794), which can be read online for free.

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Sessions to Boost Efficiency, Sustainability of Contractor Projects Featured at AHR Expo

ATLANTA - Two sessions to assist contractors in construction management and high-performance building are being offered by ASHRAE at the AHR Expo.

"The bottom line is that we're all striving to deliver excellent service for our clients and to do that more effectively," Billy Austin, chair of ASHRAE's task group on contractors and design build firms that is sponsoring the sessions, said. "These ASHRAE sessions will bring together all members of the building team to learn new skills and to explore ways to work more closely together. With contractors representing 25 percent of Expo attendees, ASHRAE seeks to bring their knowledge and expertise into these sessions as well as to help shape the Society's future activities in contracting and design/build."

The sessions, which require no conference badge or fee for AHR Expo attendees, are *Construction Management*, 2-3 p.m., Monday, Jan. 25, and *Cost/Benefit Analysis Methodology and Tools Needed by Owners*, 2-3 p.m., Tuesday, Jan. 26.

Both take place at the Orange County Convention Center, site of the 2010 AHR Expo, Jan. 25-27, Orlando. The ASHRAE 2010 Winter Conference takes place Jan. 23-27, Rosen Shingle Creek hotel, Orlando. For more information, visit www.ashrae.org/orlando.

Construction Management addresses two key contractor-related topics to help improve the quality of their work: whether systems commissioning will improve the contractors' ability to perform well and

preconstruction management basics for mechanical engineers and contractors on design-build/design-assist projects.

Cost/Benefit Analysis Methodology and Tools Needed by Owners provides an understanding of high-performance building cost-benefit analysis with a focus on the LEED rating system. Several topics are addressed, including cost/benefit project setup, fiscal metrics, constraints and length of analysis.

ASHRAE, founded in 1894, is an international organization of some 50,000 persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.

ASHRAE, UNEP Further Work in Protecting the Ozone

ATLANTA-ASHRAE and the United Nations Environment Programme have launched a joint program of work in order to reduce emissions and encourage energy-efficient refrigeration and air conditioning systems and building designs.

The First Annual Cooperation Work Plan between ASHRAE and UNEP, an organization that promotes the wise use and sustainable development of the global environment, was presented on October 5, 2009 at the Region-at-Large Chapter Regional Conference in Kuwait. The program of work sets goals and timelines for phasing out ozone-depleting refrigerants and the management of ozone-depleting substance refrigerant banks, to name just a few.

One of the ways ASHRAE will support the established goals is by providing Distinguished Lecturers to present the latest achievements in non-Ozone depleting refrigeration technology to both ASHRAE chapters and technical activities organized by UNEP. ASHRAE will also support an ozone literacy course developed by UNEP.

"By partnering with UNEP, ASHRAE can more efficiently respond to the growing demand for new technologies that do not contribute to ozone depletion and are energy efficient," Gordon Holness, ASHRAE president, said. "Through collaboration, continuing education and provision of experts on the topic, ASHRAE, UNEP and the global community can look forward a healthier environment."

The program of work is the result of a memorandum of understanding signed between ASHRAE and UNEP in June of 2007.

UNEP was formed in 1972 and acts as "the voice for the environment within the United Nations system." The Programme works with a wide range of partners to assess global, national and regional environmental conditions and trends; strengthen institutions for the wise management of the environment; and facilitate the transfer of knowledge and technology for sustainable development

Winter Conference Technical Program to Focus on Humidity, Indoor Environments

ATLANTA- What better place to learn about the latest developments in humidity control than Florida? The 2010 ASHRAE Winter Conference, which takes place January 23-27, 2010 in Orlando, Fla. will focus on developments that contribute to making indoor environments sustainable in humid climates, while also addressing a myriad of other HVAC&R industry issues.

The technical program will be based on the theme *Building Sustainability from the Inside Out*. According to Dennis Wessel, the Orlando Conference chair, "the technical program presents state-of-the-art concepts and design techniques on a wide range of hot topics."

"The technical program features a mix of presentations and papers concentrated in 11 tracks, including the impact of ASHRAE standards 90.1 and 62.1, sustainability, and a combined energy conservation and alternative energy solutions track, the largest track," Wessel said.

The technical program focuses on humidity control and the industry's ability to improve comfort for occupants and save energy. Sessions address *Operating Cost Implications in Humid Environments*, *Enhanced Dehumidification Strategies with Energy Recovery in Hot and Humid Climates*, *Humidity Control Issues and Solutions for High Performing Buildings*, *Ensuring the Performance of Your UFAD System* and *Solving Moisture Problems Created by Energy Retrofits*.

Current interest programs include building information modeling, design of healthcare facilities, wireless sensing and control networks, commissioning, data centers, LEED and ground source heat pumps. In addition, the professional skills track includes business management sessions on billing and collection practices.

The technical plenary will discuss H1N1 and look at the importance of building ventilation as compared to vaccination and quarantine in infection control. The technical plenary will take place Sunday, Jan. 24, 9:45 - 10:45 am.

Additionally, two free contractor-related sessions will be presented in conjunction with the AHR Expo held at the Orange County Convention Center. *Construction Management* will be held Monday, Jan. 25, 2-3 pm and *Cost/Benefit Analysis Methodology and Tools Needed by Owners* will be held Tuesday, Jan. 26, 2-3 pm.

In all, the technical program features more than 90 programs and 300 speakers. The 2010 ASHRAE Winter Conference and will take place at the Rosen Shingle Creek hotel, Orlando, Fla. For complete conference information, including abstracts on all technical program sessions, or to register, visit www.ashrae.org/orlando.

ASHRAE Seeks Proposals on User's Manual for Green Buildings

ATLANTA-There are many ways to define a green building. Energy-saving measures, water efficiency, indoor environmental quality, materials and building orientations all play a role, but it is the way that all of these come together that makes a building truly high performing.

Requirements to achieve green buildings will soon be available from ASHRAE, the U.S. Green Building Council and the Illuminating Engineering Society of North America in the form of a standard. Standard 189.1P, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, will define the minimum requirements for high-performance green buildings.

And to make following those requirements easier, a user's manual also is being developed. ASHRAE is currently accepting research proposals for development of a user's manual for Standard 189.1P. Proposals are due Nov. 9. For more information, visit www.ashrae.org/technology/page/548.

"The manual will provide users with a better understanding of how to apply the standard, as well as serve as a guide for self-education and training about the requirements and appropriate strategies to meet them," Kent Peterson, chair of the Standard 189 committee, said. "It will include worksheets and examples that can be used to determine compliance."

As part of its energy efficiency efforts, ASHRAE also is accepting proposals for a User's Manual for Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*. The 2010 standard, which will be published next year, is being developed with the goal of achieving a 30 percent energy cost savings improvement compared to the 2004 standard.

More information on both projects can be found at www.ashrae.org/technology/page/548.

ASHRAE Headquarters Receives Highest LEED Certification

ATLANTA-ASHRAE has always prided itself on providing the gold standard in research, standards writing, publishing and continuing education. However, when it comes to energy efficiency and sustainability, gold just isn't good enough: That's why the ASHRAE Headquarters has gone a step further and has been awarded a LEED Platinum Certification in the New Construction 2.2 rating system.

The Society's office building in Atlanta, Ga., which underwent a major renovation in 2008, is one of only six buildings in the state of Georgia to receive a LEED Platinum rating, the highest certification the program offers. LEED, which stands for Leadership in Energy and Environmental Design, is a program of the United States Green Building Council (USGBC), a non-profit which seeks to promote green building practices.

"While our first objective was to provide a healthy, comfortable and productive environment for our staff, we also wanted to set an example of what can be done to renovate existing buildings," ASHRAE President Gordon Holness said. "Given that 75 to 80 percent of all existing buildings will still be around in 2030, our greatest opportunity for a sustainable future is through the upgrade and retrofit of these buildings. It is extremely gratifying to achieve the USGBC's highest rating and confirm ASHRAE's leadership and commitment to supporting a sustainable built environment."

"The strength of USGBC has always been the collective strength of our leaders in the building industry," said Rick Fedrizzi, President, CEO & Founding Chair, U.S. Green Building Council. "Given the extraordinary importance of climate protection and the central role of the building industry in that effort, ASHRAE demonstrates their leadership through their LEED Platinum certification of their renovated Headquarters."

LEED takes into account five key measurements when evaluating new construction: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. Bonus points may be obtained through innovation in design and regional priority.

In order to qualify for the highly sought-after Platinum certification, ASHRAE took into consideration a number of concerns such as energy use, heat island reduction, water efficient landscaping, material reuse and water use reduction, to name just few.

ASHRAE addressed these issues, among others, by installing a cool, white reflective roof membrane to minimize heat island effects; updating the landscaping and eliminating the need for landscaping irrigation; retaining more than 75 percent of the existing building structure as part of this renovation; and reducing its estimated overall annual water consumption per year by almost 50 percent by utilizing low-flow fixtures throughout building. Additionally, the ASHRAE headquarters received bonus points for innovation and design.

As a leader in energy efficient technology, ASHRAE viewed its headquarters renovation as the perfect way to "walk the talk." The 34,500 ft² office building, built originally in 1965, now acts as a showcase of energy efficiency and sustainability through its living lab-which provides recourses on building, system and equipment performance-and learning center.

The LEED Platinum Certification acts as third-party verification of ASHRAE's efforts to create an environmentally friendly, energy-efficient, sustainable workplace.

Energy Efficiency Today Ensures Prosperous Economic Future, Declares President Obama

ATLANTA-President Obama has declared October National Energy Awareness Month, claiming that "a more prosperous future for our Nation's economy means making investments in energy efficiency and clean energy today."

In his official proclamation, the President emphasized the importance of focusing on energy efficiency, promoting sustainable industries and setting effective and achievable standards for the generation and use of clean energy in order to advance energy and climate security.

"The declaration as an opportunity for Americans to become more aware of how their everyday choices and actions impact energy use-particularly in their homes and the buildings where they work and play," Gordon Holness, ASHRAE president, said. "Most Americans do not cite buildings as the sector responsible for the greatest energy use and greenhouse gas emissions. Hopefully by becoming more aware, Americans will demand greater efficiency."

Obama has also issued an executive order focused on Federal leadership in environmental,energy and economic performance.

"As the largest consumer of energy in the U.S. economy, the Federal Government can and should lead by example when it comes to creating innovative ways to reduce greenhouse gas emissions, increase energy efficiency, conserve water, reduce waste and use environmentally-responsible products and technologies," the President said.

ASHRAE responded to the executive order by commending Obama's leadership to establish the Federal Government as a leader in increasing the energy efficiency of buildings, as well as to offer ASHRAE's standards and new labeling program as resources for achieving the President's goal of energy efficiency.

ASHRAE has long been doing its part to promote energy efficiency and sustainability through research, standards writing and education. For example, Standard 189.1P, Standard for the Design of High Performance, Green Buildings Except Low-Rise Residential Buildings-which is currently up for its fourth public review-addresses sustainable sites, water use efficiency, energy efficiency, a building's impact on the atmosphere, materials and resources and indoor environmental quality.

Additionally, ASHRAE's building energy labeling program, the Building Energy Quotient, provides building owners and the public with valuable information on the energy use of buildings by measuring both the energy the building is designed to use and the energy actually being consumed, thereby helping to close the gaps between intention and operation. The label is currently in its pilot stage and will be available in 2010.

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RESEARCH PROMOTION

Research Promotion Goal: \$25,250

YTD as of 11/09 Total: \$9,045 (35.8%)

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For the Research Contribution Form, click [here](#)

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ASHRAE MEMBERSHIP

Members can run their own dues renewal with the following steps:

1. Go to <http://www.ashrae.org/>
2. Login as yourself
3. Click **Update Your Bio** the in left-hand column
4. Click **Member Dues Renewal** - it will generate a file you can print or save to PDF
5. And while here, members can also update their bio to advance to Member grade if interested!

ASHRAE will continue its regular billing of members, but this new addition makes it easier for you to assist members you need something immediately!

For further information, please contact the membership chair.

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