

THE HOT AIR DIFFUSER

Chapter Newsletter

SEPTEMBER 2012

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PRESIDENT'S MESSAGE

Dear Idaho ASHRAE members,

I am very excited to get the 2012-2013 ASHRAE session going! The board is currently looking to fill our Webmaster Chair position, so please let me know if you have anybody who might be interested. We are in the process of transferring the Idaho ASHRAE website to be hosted by Star Chapter which will save time, money, and will allow us to implement changes ourselves. The new website will also make event registrations such as our annual golf tournament and technical conference more streamlined.

A couple things to keep in mind: Our first meeting this year will be a tour of the WINCO distribution facility. Don't forget to bring a few bucks cash for the Research and Promotion raffle.

Also, don't forget to bring your camera to our chapter meetings and capture candid shots of our events. The pictures can be sent to our Chapter Historian, Steve Hardy, to be saved for eternity. This will help tremendously in documenting chapter events so we have them for future reference.

I hope to see all of you on Wednesday the 12th.

Thanks,
Randy R. Reed
Idaho ASHRAE President

SEPTEMBER PROGRAM*

This month's chapter meeting will be a tour of the New WinCo Distribution Facility. The entire facility is approximately 600,000 SF with 70,000 SF of refrigerated storage. Our tour will focus mainly on the refrigeration systems.

When: WEDNESDAY, Sept. 12
(11:45AM-1:00PM)

Where: WinCo Distribution Center
2390 E. Freight St. (Park in Employee Lot) Boise, Idaho

DIRECTIONS: I84 East to Exit 59A, Turn right at the end of the ramp onto Eisenman Rd., Take the second left to enter the employee parking lot. Do not enter the truck entrance at Freight St.

***Please RSVP at www.idahoashrae.com**

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ATTENTION: ASHRAE MEMBERS

The Chapter is now accepting advertisements in the monthly newsletter.

Sponsorship Rates are as follows:

	Per Issue	Annual (9 issues)
★ Business Card	\$10.00	\$50.00
★ Quarter Page	\$25.00	\$200.00
★ Half Page	\$40.00	\$325.00
★ Full Page	\$60.00	\$450.00

CHC Press Release

100% Employee Owned

CHC Columbia Hydronics is pleased to announce our appointment as the manufacturer's representative for Tower Tech. Our representation will encompass the five (5) Pacific Northwest states of **Alaska, Montana, Idaho, Oregon & Washington.**



Tower Tech is a Six Sigma manufacturer of cooling towers that specializes in innovative design:

- Lowest kW/ton in the industry with 3:1 turndown for variable flow capability
- Far less drift than conventional tower designs
- Minimized Legionella concerns due to no direct UV contact + high basin velocity
- Multiple fan design for ease of maintenance, built-in redundancy, and low electrical loads
- Self-cleaning spray nozzle & patented water collection system
- Quick to install (typically 1 hr per tower) + modular for future growth
- Rated for 150mph wind load & Seismic Zone 4
- 15 yr warranty on fiberglass shell & 5 yr warranty on fan motors, fill & drift

We believe that Tower Tech's innovative design features combined with CHC's product and system knowledge provide our valued customers with the best selections of cooling towers, filter products, along with pump and system knowledge.

We at CHC Columbia, strive to be the industry's leading, most respected vendor, and we believe that our excellent product lines make it possible to accomplish that goal.

To learn more about Tower Tech, please contact your local CHC Sales Engineer or Business Development professional.

Manufacturer's
Representative



Hydronic Systems
Expertise

For more information, or to request updated literature, please contact us at:

Toll-Free: (888) 690-0090

Email: sales@columbiahydronics.com

August, 2012

www.chchydronics.com

IMPORTANT DATES

SEPTEMBER 12, 2012—ASHRAE MEETING

OCTOBER 8, 2012—COLUMBUS DAY

OCTOBER 31, 2012—HALLOWEEN

HISTORY LESSON

Five Years Ago

The chapter president was Xenon Long. The meeting was held on Friday, September 14, 2007, at the Idaho Power Building. The program was a History Channel DVD on the origins and growth of the HVAC industry.

Ten Years Ago

The chapter president was Preston Nance. The meeting was held on Friday, September 13, 2002, at the Double Tree Riverside. The program was a design/build panel discussion about the pros, cons, risks, benefits, insurance issues, and more, for the owner, contractors, and design professionals. The panel consisted of Rob Thornton, Architect, Erstad-Thornton Architects; Jack Koonce, Developer, Oppenheimer Development; Cathy Miller, Engineer, Engineering Consultants, Inc.; Torry McAlvain, General Contractor, McAlvain Construction; Wayne Meuleman, Legal Counsel, Meuleman & Miller; Nathan McMasters, Subcontractor, YMC Inc.; and Jon Riche, Surety, March.

Twenty Years Ago

The chapter president was Richard Kartchner. The meeting was held on Friday, September 11, 1992, at the Kings Table Restaurant. The committee chairmen described the functions of their committees.

Twenty Five Years Ago

The chapter president was Phil Terrell. The meeting was held on Friday, September 11, 1987, at the Kings Table Restaurant. John Beal, Supervisor of Ground Water, Idaho Department of Water Resources, gave a presentation on geothermal reserves of the Boise aquifer.

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



2013 ASHRAE Winter Conference and AHR Expo
Jan. 26–30/Jan. 28–30
Dallas, TX

ASHRAE



www.ashrae.org/dallas

NEWS FROM THE HOME OFFICE

ASHRAE Funds 22 Undergraduate Projects; Creation of “Shack” to Study Energy Efficiency

ATLANTA – Design and construction of a “shack” to demonstrate renewable and HVAC technologies, including solar thermal heating, photovoltaic power generation, high efficiency and green insulation options and wood pellet stoves, is being developed by undergraduate students in an ASHRAE Undergraduate Senior Project Grant.

This year, 22 schools from around the world were awarded grants. The grants, totaling some \$100,000, are awarded by ASHRAE to colleges and universities worldwide to promote the study and teaching of HVAC&R, encouraging senior undergraduate students to pursue related careers.

The grants are used to design and construct projects, such as Minnesota State University – Mankato’s proposal to design and construct a renewable and HVAC technologies test-bed “shack.”

“In the spirit of the Solar Decathlon and the movement toward ‘tiny homes,’ this project aims to design and build a structure of some 24 square feet that can be used to demonstrate renewable and HVAC technologies,” Patrick Tebbe, faculty advisor at Minnesota State University – Mankato, said. “The ‘shack’ will be designed to accommodate a range of technologies for demonstration and testing in the classroom and research projects.”

Given the university is located in the heart of ice fishing territory, the shack design will be loosely based on typical ice fishing huts or shacks. The inclusion of ice fishing creates an immediate engagement for both students and the public, according to Tebbe. He said the students hope this will generate interest in energy efficiency and sustainable design topics beyond upper level engineering courses. The shack also will be portable (most likely constructed on a sled) so it could be moved to test sites, high schools, open houses, etc., allowing for greater demonstration. It also could be adapted for summer applications.

The project will incorporate a flat plate solar collector to supplement interior heating, testing of various wood and pellet fueled stoves and weather stations from previous solar research. The construction materials likely will be supplemented with recycled and reused materials found locally.

Other ASHRAE grant recipients are:

- Purdue University – Calumet (Hammond, Ind.) – was deemed the top grant award winner for its project, Refrigeration and Heat Pump Teaching System. Two students from the university are invited to present their project as part of the Student Program at the 2013 ASHRAE Winter Conference in Dallas
- American University of Beirut (Lebanon) – Test and Optimize a Zonal Air Distribution System to Inactivate Airborne Microorganisms using Upper-Room Ultraviolet Germicidal Irradiation
- Carleton University (Ottawa, Ontario, Canada) – Measurement of Indoor Air/Environmental Quality in Arctic Housing and University Campus Buildings

- North Carolina A& T State University (Greensboro, N.C.) – Impacts of Air Filters on Energy Consumption in Typical HVAC Systems
- Sinclair Community College (Dayton, Ohio) – Primary – Secondary Hot Water and Chilled Water System Design and Installation
- Transylvania University of Brasov – Testing Laboratory Using Renewable Sources for Radiant vs. Convective Heating and Cooling
- Universidad Pontificia Bolivariana (Colombia, South America) – Clima Emulator Using Chilled Water HVAC System as Energy Sourced
- Universiti Teknologi Malaysia (Johor) – Effect of Ejector Geometric Parameter on the Unitary Air Conditioner as an Expansion Device
- University of Alaska Anchorage – Air Duct Simulator
- University of Alberta (Edmonton, Canada) – Undergraduate Boiler Performance Laboratory
- University of Urbana-Champaign (Illinois) – Design and Construction of an Energy Recovery Ventilation Demonstration Unit Using Heat Pump for Laboratory Use
- University of Indonesia (Kampus UI Depok) – Development of Smoke Venting Demonstration Apparatus
- University of Lagos (Nigeria) – Design and Fabrication of a Biogas-Powered Water Refrigeration Heating System
- University of Maryland (College Park) – Energy Consumption Analysis and Optimum Cooling Solutions for a Medium Size Data Center
- University of Minnesota (Minneapolis) – Desiccant Dehumidification Test Facility
- University of Windsor (Ontario, Canada) – Underwater Compressed Air Energy Storage System Model
- Western Kentucky University (Bowling Green) – Air Flow Visualization System Using Infrared Thermography
- Wright State University (Dayton, Ohio) – Heat Powered Demonstration Chiller
- California State Polytechnic University (Pomona) – Moisture Control for Carbon Dioxide Sensor Applied in a Residential Furnace
- Jimei University (Xiamen, China) – Design and Construction of an Experimental Facility for Fresh Air Ventilator with Exhaust Air Heat Recovery Systems
- University of Algarve (Faro, Portugal) – Development of Sensors for HVAC Systems Control Based in the Human Thermal-Physiology

For more information on the grant program, visit www.ashrae.org/grants. ASHRAE will begin accepting applications for the 2013-14 program in August 2012, with a December 2012 final deadline.

Things Heat Up for ASHRAE: Annual Conference to be Held in San Antonio, Texas

ATLANTA—In a city with deep historical roots, ASHRAE will convene in San Antonio, Texas, to not only “remember the Alamo,” but look toward a greener future. The 2012 ASHRAE Annual Conference focuses on everything from the basics of HVAC maintenance to integrated building design.

As members work together to shape tomorrow's built environment, the influences of San Antonio's past—Old Mexico, the Wild West and the Deep South—serve as a reminder of the Society's significant role in the city's hot and dusty past, as well as the Society's position as part of a future of sustainability. Join ASHRAE in this historic city; registration is now open for ASHRAE's 2012 Annual Conference, June 23-27.

The Technical Program features focused tracks on Integrated Energy Systems, Building Modeling Applications, Refrigeration Applications and Indoor Environmental Applications and general tracks addressing HVAC&R Systems and Equipment and Fundamentals and Applications.

"Interoperability of Smart Building Systems and Smart Grid" is the topic of the Technical Plenary, presented by Lawrence Jones, Ph.D., Alstom Grid Inc., Washington, D.C., on Sunday, June 24.

Also, an Integrated Building Controls "mini-conference" addresses the extension of building controls from just mechanical systems to lighting, water consumption, security and other building systems, working toward the goal of "intelligent buildings." Sessions related to this topic are scheduled on Sunday and Monday.

The technical program begins Sunday, June 24, and ends Wednesday, June 27, with all sessions at the Henry B. Gonzalez Convention Center. Complete program details are available at www.ashrae.org/sanantonio. The entire technical program is approved for PDHs, and the majority of sessions are also approved for NY PDHs, AIA LUs and LEED AP credits. The ASHRAE Learning Institute offers eight instructor-led training opportunities. Participants may choose from two full-day and six half-day courses to stay current on HVAC trends, including a new offering on understanding ASHRAE Standard 189.1-2011, Standard for the Design of High-Performance, Green Buildings.

The Conference keynote speaker is Ryan Dorsey, the Gen Y Guy®. Dorsey will focus on "Crossing the Generational Divide," explaining how four generations are currently working side-by-side in the workplace and the strengths, weaknesses and different perspectives of each. The Plenary session takes place Saturday, June 23 at Grand Hyatt San Antonio.

ASHRAE technical tours offer an inside view of how technology developed by members is practically applied in building environments. Tours at the Annual Conference include the SAWS Chiller Plant and the Blue Wing Solar Farm.

The ASHRAE Annual Conference takes place June 23-27. Register before April 20 for early bird rates. The Grand Hyatt San Antonio will serve as the headquarters hotel. Visit www.ashrae.org/sanantonio for more information.

Changes Related to Data Centers, Lighting, Space Heating Energy Source Proposed for ASHRAE/IES Energy Standard

ATLANTA – A proposed change to the ASHRAE/IES energy standard regarding data centers recognizes the role that system efficiencies – vs. only equipment – can play in reducing energy consumption.

"This change regarding data centers represents a building block as we work to build on the foundation of energy conservation in the standard," Drake Erbe, 90.1 vice chair, said. "We recognize that equipment used in buildings is reaching maximum capabilities in energy efficiency. We now must examine the role that system efficiencies play in saving energy. Inclusion of data centers in the standard was a step in that direction."

With publication of the 2010 standard, ANSI/ASHRAE/IES Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings, data centers were included within its scope for the first time. Most data centers were required to have economizers, but some in the data center industry disagreed with the requirement, maintaining that economizers are subject to static discharge due to low humidity, gaseous contaminants and reliability.

Erbe said the 90.1 committee worked with the data center industry and ASHRAE's technical committee on mission control facilities, technology spaces and electronic equipment to develop an alternative path known as power usage effectiveness (PUE) to allow use of developing technologies for which there are no energy modeling tools available. The path is addressed in proposed addendum ap, which is currently open for public comment.

"This is a significant issue to design professionals in that without a simulation program available to model these systems they have to receive approval from the authority having jurisdiction for an exceptional calculation method, which, in most cases, is beyond the jurisdiction's knowledge level," Erbe said. "The PUE values were developed using water cooled chillers with water size economizers and air cooled chillers with air side economizers, using prescriptive requirements currently in the standard. The PUE values for all climate zones are able to be achieved by both of these conventional system types."

In total, 15 proposed addenda to Standard 90.1 are open for public review. For more information, visit www.ashrae.org/publicreviews.

Also open for public comment is addendum ao, which offers an alternative compliance path for lighting requirements aimed at the large number of smaller, simpler buildings that make up a majority of new construction and retrofit activity, according to Eric Richman, chair of the standard's lighting subcommittee. It provides a less complicated set of requirements that should be easier to apply to these types of facilities, and also includes more stringent Lighting Power Density (LPD) limits that may restrict the application of more lavish space lighting designs not commonly found in these facilities. This compliance path will replace the current whole building LPD table and only applies to a subset of building types that encompass many of the smaller, simpler buildings. The use of this method is optional and the full space-by-space method used by most designers for larger more complex facilities still remains for application to any building type, Richman said.

In addition, addendum al is open for public review. Users of Appendix G of the standard have noted that the base-line energy budget is different depending on whether electricity or natural gas is chosen for either space heating and water heating, according to Don Brundage, a member of the Energy Cost Budget subcommittee. In some cases, this can provide greater

energy savings estimates from Appendix G when using one fuel versus another, and provides a strong incentive to specify the fuel that will provide the greatest energy savings using Appendix G.

“Proposed addendum al would make the baseline building energy budget (the minimum code baseline for determining energy savings) the same regardless of the choice of fuel in the proposed building, eliminating this bias,” Brundage said. “This is done by setting rules to determine the fuel to be used in the baseline building for space and water heating. These rules are based on climate zones for space heating and type of building usage for water heating. This would make energy savings estimates using Appendix G more consistent and fair than under the current version of the standard.”

In addition to addendum al, ao and ap, eight other addenda are open for public review from March 23 until May 7. They are addenda af, ag, ai, am, an, aq, ar and at.

Four addenda are open for public review from March 23 until April 22. They are addenda ad, ah, aj and as.

ASHRAE Hosts Luncheon on Commercial Buildings Energy Consumption Survey

ATLANTA – An update on the Commercial Buildings Energy Consumption Survey (CBECS) – one of the United States’ most essential building energy use surveys – is featured at a luncheon hosted by ASHRAE next month.

Tom Lecky, director of the Energy Information Administration (EIA)’s Energy Consumption and Efficiency Statistics, which administers CBECS, will serve as guest speaker at the May 4 event at the National Press Club in Washington, D.C. ASHRAE President Ron Jarnagin will serve as moderator. The luncheon is part of the American National Standards Institute (ANSI) monthly Caucus luncheon services. As an ANSI member, ASHRAE is sponsoring the May event.

“The luncheon provides a great opportunity for ANSI Federation members and others in the built environment industry to hear about CBECS and how important it is to building performance benchmarking,” Jarnagin said.

CBECS is a national sample survey that collects baseline information on the stock of U.S. commercial buildings, their energy-related building characteristics and their energy consumption and expenditures.

Last year, EIA announced it would not be releasing the results of the 2007 CBECS due to data collection errors. As a result of appropriations reductions, EIA also announced that it would halt work on the 2011 edition of the Survey. Currently, the latest version of CBECS data is from 2003. ASHRAE and other groups in the built environment industry asked the agency and Congress to reconsider, and allow work on the Survey to continue.

As a result, funding was restored, and CBECS is being conducted for reference year 2012. Data collection is slated to begin April 2013, with the first data releases expected in spring 2014. According to EIA, its focus is on collaboration with stakeholders to develop the CBECS questionnaire. ASHRAE has provided feedback on the document, which can be found at www.ashrae.org/government-affairs.

To obtain the data used in CBECS, interviews are conducted for a sample of commercial buildings representing the 50

States and the District of Columbia. For buildings in the survey, data are collected on the types, amount and cost of energy consumed in the building, how the energy is used, structural characteristics of the buildings, activities conducted inside the buildings that relate to energy use, building ownership and occupancy, energy conservation measures and energy-using equipment.

CBECS data are critical to the building community because they help form the basis for understanding patterns of energy use, informing the decisions of the industry and key policymakers and government programs, according to Jarnagin.

“For instance, CBECS data are used by ASHRAE in the development of its building energy efficiency standards, which are used by the federal government and most states,” Jarnagin said. “CBECS data are also used by many federal and private sector programs in their efforts to promote building efficiency.”

Advanced Energy Design Guidance Offered for Large Hospitals

ATLANTA—A dose of guidance to help save energy in hospitals is prescribed by the newest Advanced Energy Design Guide (AEDG), written by a group of leading building industry organizations.

The AEDG for Large Hospitals is the fourth in the series, designed to provide recommendations for achieving 50% energy savings when compared with the minimum code requirements of ANSI/ASHRAE/IESNA Standard 90.1-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings.

The book was developed by a committee representing a diverse group of energy professionals drawn from ASHRAE, the American Institute of Architects (AIA), the Illuminating Engineering Society (IES), the Department of Energy (DOE) and the United States Green Building Council (USGBC).

“Most important in the Advanced Energy Design Guide for Large Hospitals is the recognition that patient outcomes, safety and experience trump all cost- and energy-saving strategies,” Shanti Pless, chair of committee that wrote the guide, said. “However, a well designed, constructed, operated and maintained facility is a major contributor to the environment of care and can improve patient outcomes, safety and comfort.”

The Guide focuses on standard mid-to-large-size hospitals that would typically be at least 100,000 square feet in size but the strategies apply to all sizes and classifications of large hospitals. Space types covered include conference, lobby, lounge and office areas; reception/waiting areas and examination and treatment rooms; clean and soiled workrooms; nurse stations, nurseries, patient rooms; operating rooms, procedure rooms, recovery rooms and sterilizer equipment areas; pharmacies and laboratories; triage, trauma and emergency rooms; physical therapy and radiology/imaging rooms; and storage, receiving and mechanical/electrical/telecom rooms.

Included in the Guide are recommendations for the design of the building opaque envelope; fenestration; lighting systems; HVAC systems; building automation and controls; outdoor air requirements; service water heating; measurement and verification; and plug and process loads, including kitchen equipment.

Along with whole building and technology case studies, the Guide highlights that existing reliable technologies and design philosophies can be used to reduce energy, according to Pless. Some of the technologies and philosophies highlighted in the book include:

- Use of shape and form to give access to daylighting in spaces that usually have no windows
- Daylighting of staff areas and public spaces while at the same time specifying proper glazing to control solar gain
- Elimination of reheat, which is the largest energy saver from the HVAC system. Other HVAC savings come from the de-coupling of ventilation air treatment and space conditioning and the elimination of steam boilers
- Recommendations to reduce and control plug and process loads including commercial kitchen equipment
- Reductions in interior and exterior lighting
- Recommendations involving LED surgery lights, which have the added benefit of allowing surgeons to set the thermostat higher in the operating rooms
- Measurement and verification recommendations to demonstrate savings are being realized with the added benefit of helping solve operational issues

The 50% Advanced Energy Design Guide series follows an earlier series that provided guidance to achieve 30% savings. The ultimate goal is to provide guidance to achieve net zero energy buildings; that is, buildings that, on an annual basis, produce more energy than they consume.

Other books in the 50% savings series deal with small to medium office buildings, K-12 schools and medium to big box retail buildings. Since the Guides first began to be offered as free downloads at the beginning of 2008, more than 400,000 have been downloaded.

For more information on the entire Advanced Energy Design Guide series, or to download a free copy, please visit www.ashrae.org/freeaedg. A print version of the Guide may be purchased for \$82 (\$69, ASHRAE members). To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit www.ashrae.org/bookstore.

ASHRAE Launches New Terminology Site – ASHRAEwiki

ATLANTA – Common definitions for terms found in ASHRAE standards and other publications can now be found at a new website from the Society.

The free ASHRAEwiki is located at www.ashraewiki.org and contains over 6,000 terms related to buildings with a particular focus on mechanical, envelope, electrical, lighting, load calculations, design, water design/conservation and energy use and measurement metrics.

“Common terminology in communications and particularly in standards helps users in their understanding, thus encouraging adoption and use,” Art Hallstrom, a member of ASHRAE Technical Committee 1.6, Terminology, said. “The ASHRAEwiki goal is to improve communication by encouraging the use of consistent terminology definitions within ASHRAE and the industry, worldwide.”

The new ASHRAEwiki can create custom reports of

terms and primary definitions that will aid in the development of standards, guidelines, Handbooks and other ASHRAE publications. With time, it may have broader use across the industry, according to Hallstrom.

Each term in the wiki has one or more primary (recommended) definitions, in which ASHRAE standard(s) the term is used, the definition source and known legal information such as trademark registration. The wiki also lists any secondary definitions used in an ASHRAE standard or guideline, which will help with the development of consistent standards.

“There is no requirement to use an ASHRAEwiki primary definition, but standards developers should be able to see the value in consistency across all standards,” Hallstrom said.

ASHRAEwiki terms are grouped by words, symbols, abbreviations and acronyms. Definitions that include units may use Inch-Pound (I-P) or International System (SI) as primary units. ASHRAEwiki is in English but might be expanded to other languages in the future.

“ASHRAEwiki content is controlled by the ASHRAEwiki editors and TC 1.6 but suggestions from individuals or organizations are welcome,” Bruce Billedeaux, TC 1.6 vice chair, said. “Suggestions can be entered in the wiki discussion section or sent to the ASHRAEwiki editor.”

ASHRAEwiki replaces a proposed ASHRAE Standard, Standard 166P, Heating, Ventilating, Air-Conditioning and Refrigerating Terminology, which had been proposed to offer uniform terminology for use in the HVAC&R industry.

Proposed Revisions to Energy Standard for Existing Buildings Open for Public Comment

ATLANTA – Public input is being sought into revision of an ASHRAE/IES standard that addresses retrofit of existing residential and commercial buildings to achieve greater energy efficiency.

Last year, ASHRAE and the Illuminating Engineering Society (IES) announced they were revising ANSI/ASHRAE/IESNA Standard 100-2006, Energy Conservation in Existing Buildings, to provide greater guidance and a more comprehensive approach to the retrofit of existing buildings for increased energy efficiency. The standard was first published in 1981, and the need for its requirements has grown as more attention is paid to improving energy in current building stock.

“Information from the International Energy Agency shows that the building sector is the largest consumer of energy in the United States, using some 40.3 quadrillion Btus of energy in 2002, around 41 percent of total U.S. energy use,” Rick Hermans, chair of the committee writing the standard, said. “Compliance with this standard by every building would reduce that energy use by three quarters.”

Public input to the proposed changes is being sought from May 4 until June 18. For more information on how to comment, visit www.ashrae.org/publicreviews.

The proposed changes include criteria for energy use surveys and auditing and requirements related to implementation and verification. Appendices are included for life cycle cost analysis procedures as well as identification of potential energy conservation measures.

Recognizing that the actual occupancy of the building plays a key role in its performance, the standard established the

need for development of an energy management plan and an operation and maintenance plan.

“The standard takes advantage of the fact that any building which has been in operation for at least 12 months can quickly determine its performance relative to some benchmark, which is defined in the standard as an energy use intensity target,” Hermans said. “This concept is the new paradigm for energy conscious design, construction and operation of buildings.”

The standard provides requirements for the retrofit of existing buildings and addresses major and minor modifications for both residential and commercial buildings, single and multiple activity buildings with variable occupancy periods and identifies an approach for 53 building types in 16 climate zones/sub-zones.

The revised standard also identifies energy efficiency requirements for buildings with and without energy targets and provides multiple levels of compliance.

Guidance on Variable Refrigerant Flow Systems Included in New ASHRAE Handbook

ATLANTA – New guidance on variable refrigerant flow is featured in ASHRAE’s new 2012 Handbook volume.

The 2012 ASHRAE Handbook – HVAC Systems and Equipment discusses systems and the equipment that comprises them, including features and differences. It is designed to help system designers and building operators select and use equipment. It contains 52 chapters.

Chapter 18, Variable-Refrigerant-Flow (VRF) Systems, describes these systems, their components and applicable standards in detail, and includes a system design example and important guidance on costs, controls and safety. In previous volumes, variable refrigerant flow was covered in the unitary products section.

“This new chapter covers the A to Z of variable refrigerant flow – from application of VRF to understanding how VRF works and from analyzing a building load in terms of VRF to zoning with VRF,” Paul Doppel, chair of ASHRAE’s technical committee on variable refrigerant flow that wrote the chapter, said. “The chapter offers an excellent overview of VRF technology, including discussion about 2-pipe and 3-pipe system performance during heating operations.”

The chapter also includes a section that lays out a process for designing with VRF including a load analysis, as well as discussions regarding system expansion and designing systems to meet ASHRAE standard requirements.

“Since VRF systems can connect more than 100 percent nominal capacity of indoor units (up to 150 percent in some cases), the chapter also addresses shows how VRF can be used to satisfy changing building conditions with smaller capacity systems by using building diversity and multiple indoor units,” Doppel said.

Other highlights in the 2012 volume:

- Chapter 12, District Heating and Cooling, has an extensive new section on economic comparisons, plus several new detailed examples.
- Chapter 17, Ultraviolet Lamp Systems, has new results from ASHRAE research project RP-1509 on degradation of materials irradiated by UVC energy.

- Chapter 19, Duct Construction, has a rewritten section on duct leakage, and new information on air dispersion systems and factory-built grease duct systems.

- Chapter 21, Fans, has added descriptions of types of fans and their applications; many upgraded figures; vibration categories, grades and limits; and a complete rewrite and update for the controls section.

- Chapter 51, Thermal Storage, has new content on unitary thermal storage systems (UTSSs), two new detailed sizing examples, several new figures, and extensive new guidance on equipment selection and operation.

The cost of the 2012 ASHRAE Handbook – HVAC Systems and Equipment, print edition (either I-P or SI and includes a CD of all content in both I-P and SI units) is \$199. The 2012 volume also is available in CD format for \$179.

To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide) or visit at www.ashrae.org/bookstore.

Equipment Projections to 2020! ASHRAE Releases the Second Edition of its Datacom Equipment Power Trends Book

ATLANTA – Datacom technology has short product cycles and frequent equipment updates. In contrast, datacom facilities and their HVAC systems typically have long life cycles. This mismatch of cycles means that a datacom facility’s design must be flexible enough to respond quickly to the changing needs of datacom equipment.

Based on the latest information from all the leading datacom equipment manufacturers, the newly published second edition of ASHRAE’s “Datacom Equipment Power Trends and Cooling Applications” provides new and expanded datacom equipment power trend charts to allow datacom facility designers to more accurately predict future datacom equipment loads of facilities and provides ways of applying the trend information to datacom facility designs today. Trends for individual components supplement the previous trend information, providing an understanding of the forces driving overall information technology equipment (ITE) power consumption.

“This second edition focuses on helping planners, designers and operators develop solutions that are more affordable today yet include provisions for future generations of IT equipment by providing valuable information on component and equipment trends as well as how to apply them,” said Don Beaty, chair of the Publications Subcommittee of ASHRAE’s technical committee (TC) 9.9, Mission Critical Facilities, Technology Spaces and Electronic Equipment, which wrote the book.

Chapters include an introduction, background, component power trends, load trends and their application, air cooling of equipment, liquid cooling of equipment, practical example of trends to data center design, and a valuable appendix that includes practical application examples.

The book is part of the ASHRAE Datacom Series, developed to provide a more comprehensive treatment of datacom cooling and related subjects. Other books in the series are “Green Tips for Data Centers,” “Particulate and Gaseous Contamination in Datacom Environments,” “High Density Data

Centers – Case Studies and Best Practices,” “Design Considerations for Datacom Equipment Centers,” “Best Practices for Datacom Facility Energy Efficiency,” “Thermal Guidelines for Data Processing Environments,” “Liquid Cooling Guidelines for Datacom Equipment Centers,” “Real-Time Energy Consumption Measurements in Data Centers” and “Structural and Vibration Guidelines for Datacom Equipment Centers.” For more information, visit www.ashrae.org/datacenterefficiency

The cost of “Datacom Equipment Power Trends and Cooling Applications” is \$54 (\$46, ASHRAE members).

To order, contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit www.ashrae.org/bookstore.

ASHRAE and UNEP Join Forces to Promote Sustainable Refrigeration in Facilities and Systems

ATLANTA – ASHRAE and the United Nations Environment Programme announced today a collaborative effort to develop and publish a new Guide for Sustainable Refrigerated Facilities and Systems. This \$400,000 project is being jointly funded by ASHRAE and the Multilateral Fund for the Implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer and is scheduled to be completed in early 2014.

The Guide will address the entire range of facility and equipment design and efficiency alternatives for refrigerated processing, storage and distribution (the cold chain) in both developed and developing countries. As global urbanization continues, refrigerated storage and transport from farm to store is critical. Food spoilage is a significant sustainability problem particularly in least developed countries. Medicine storage and transportation is likewise critical.

The Guide is also important as Parties to the Montreal Protocol face upcoming compliance deadlines. For developing countries, that means a freeze in HCFC consumption and production by Jan. 1, 2013, followed by a 10 percent reduction in 2015 and 97.5 percent reduction by 2030. Currently, HCFC-22 is the preferred refrigerant for many facilities and systems, particularly for small-medium sized enterprises, but this ozone depleting gas is being phased out under the Montreal Protocol. The Guide’s goal is to support the selection of alternatives while maintaining or improving energy efficiency across the entire cold chain and reducing the environmental footprint. That, in turn, supports countries’ compliance with this international treaty and improves global sustainability.

“This is the largest collaborative project ASHRAE has undertaken with UNEP and truly represents our global leadership approach to solving society’s issues,” Ron Jarnagin, ASHRAE president, said. “We, with our partner associations, look forward to working with UNEP on this extremely important refrigeration guide.”

James Curlin, interim head of UNEP’s OzonAction Branch notes: “The protection of the stratospheric ozone layer under the Montreal Protocol has a long track record of meeting specific and measurable sustainable development objectives, including contributing to Millennium Development Goal 7, ‘Ensuring Environmental Sustainability.’ This guide will help

impart such sustainability considerations to the owners and operators of refrigerated systems and facilities in developing countries, and help them make informed decisions about refrigerants, equipment and energy efficiency considerations. We look forward to working with ASHRAE to deliver this strategic technical guide.”

UNEP is the United Nations system’s designated entity for addressing environmental issues at the global and regional level. Its mandate is to coordinate the development of environmental policy consensus by keeping the global environment under review and bringing emerging issues to the attention of governments and the international community for action.

The Montreal Protocol on Substances That Deplete the Ozone Layer is an international treaty designed to protect the ozone layer by phasing out the production and consumption of a number of substances believed to be responsible for ozone depletion. The treaty was opened for signature on Sept. 16, 1987, and entered into force on Jan. 1, 1989. Since then, it has undergone five amendments, in 1990 (London), 1992 (Copenhagen), 1995 (Vienna), 1997 (Montreal) and 1999 (Beijing). Due to its widespread adoption and implementation it has been hailed as an example of exceptional international cooperation “Perhaps the single most successful international agreement to date...”

The Multilateral Fund for the Implementation of the Montreal Protocol is managed by an Executive Committee which is responsible for overseeing the operation of the Fund. The 2012 Committee membership includes Argentina, Belgium, Canada, China, Cuba, Finland, India, Japan, Jordan, Kenya, Mali, Romania, United Kingdom of Great Britain and Northern Ireland, and United States of America. Xiao Xuezhi (China) is the current chair, and the Committee is assisted by the Fund Secretariat which is based in Montreal, Canada. UNEP is one of four Implementing Agencies of the Fund, along with UNDP, UNIDO and the World Bank.

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New Publication Extends Comprehensive Treatment of Smoke Control

ATLANTA – A new handbook providing comprehensive treatment of smoke control technology is now available.

Published by ASHRAE in cooperation with the Society of Fire Protection Engineers (SFPE), the International Code Council (ICC) and the National Fire Protection Association (NFPA), the “Handbook of Smoke Control Engineering” extends the tradition of the comprehensive treatment of smoke

control technology, including fundamental concepts, smoke control systems, and methods of analysis. The handbook provides information needed for the analysis of design fires, including considerations of sprinklers, shielded fires and transient fuels. It is also extremely useful for practicing engineers, architects, code officials, researchers and students.

Following the success of “Principles of Smoke Management” in 2002, this new book incorporates the latest research and advances in smoke control practice into 24 chapters with more than 500 pages of in-depth guidance. New topics in the handbook are: controls, fire and smoke control in transport tunnels and full-scale fire testing. For those getting started with the computer models CONTAM and CFAST, there are simplified instructions with examples. This is the first smoke control book with climatic data so that users will have easy-to-use weather data specifically for smoke control design for locations in the U.S., Canada and throughout the world. The book builds on earlier publications from ASHRAE and SFPE.

“While serving as a useful tool to practicing engineers, it also is useful to other engineers, architects and code officials,” co-author John H. Klote, D.Sc., P.E., said. “Because the book addresses the principles of how smoke control systems function, it will be useful to engineers throughout the world.”

“The ‘Handbook of Smoke Control Engineering’ is a must-have reference for anyone involved in the design of smoke management systems,” Morgan Hurley, P.E., SFPE technical director, said. “This was changed from its previous textbook format into a handbook format to make it more useful to practicing engineers. Also, authors of the earlier books have enlisted the help of new co-authors for this edition, which increases the breadth of the handbook.”

“Many of today’s fire protection and life safety systems incorporate smoke managements systems,” Christian Dubay, P.E., vice president and chief engineer, NFPA, said. “As buildings become more complex the requirements of smoke management systems must adjust to ensure that the intended design objectives are met. The ‘Handbook of Smoke Control Engineering’ ensures that engineers and designers have the most up to date and technically relevant information at their fingertips.”

“A critical safety feature of today’s modern buildings, the design of smoke control systems, can be challenging and often requires collaboration between various project design teams. Where a smoke control system is required by the International Building Code® (or other codes and standards), the ‘Handbook of Smoke Control Engineering’ provides team members with the tools and information needed to effectively and accurately design and construct such systems,” Hamid Naderi, ICC’s senior vice president for product development, said.

The cost of “Handbook of Smoke Control Engineering” is \$129 (\$109, ASHRAE members). To order, contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit www.ashrae.org/bookstore.

Focuses on Research & Integrated Project Delivery: ASHRAE Announces Call for Papers for 2013 Annual Conference, June 22-26, Denver, Colo.

ATLANTA – ASHRAE has announced a call for papers for its 2013 Annual Conference in Denver, Colo., June 22-26.

The conference seeks papers on current research worldwide; core HVAC&R applications and systems; and, featured for this conference, Integrated Project Design, Energy Modeling and Building Efficiency Performance.

The Research track seeks papers that report on all aspects pertaining to HVAC&R and attempts to bring together researchers to present and discuss the latest research. The Research track has an emphasis on Renewable Energy Research and its role in the industry’s movement toward a clean energy economy. Papers describing ASHRAE-related research are encouraged as well as papers from societies and associations worldwide.

As with past ASHRAE conferences, the Denver Conference seeks papers addressing the core HVAC&R Systems and Equipment, and Fundamentals and Applications advances and practices.

The Integrated Project Delivery (IPD) track addresses the evolving method of managing a design project from conceptual design through to the operation and maintenance phase, based on the concept of shared risk/profit and teamwork. Papers in this track will focus on success and lessons learned with IPD, as well as individual roles in IPD collaboration.

The Building Energy Modeling vs. Measurement & Verification track seeks papers discussing the accuracy of building energy modeling programs compared to utility usage in the actual building after one to two years of occupancy, investigates trends in building modeling; and/or the realities of construction and O&M, such as systemic construction issues that lead to long term non-performance and training staff to operate a building as it was designed to perform.

The Mile-High Efficiency & Equipment Track seeks papers highlighting new breakthroughs in equipment and building systems that contribute to a building’s overall high-efficiency performance.

ASHRAE offers two types of paper submissions:

- Conference Paper Abstracts due Sept. 24, 2012. Upon acceptance, papers will be due January 14, 2013. These “final” papers undergo a single-blind review, are submitted as a PDF and have an eight single-spaced page maximum length.
- Full Technical Papers due Sept. 24, 2012. Papers submitted for review must be both technically accurate and clearly written. These papers undergo a rigorous double-blind review and can be a maximum of 30 double-spaced pages.

To submit a conference paper abstract or a technical paper and for more information about the tracks, go to www.ashrae.org/Denver.



ASHRAE Installs New Officers, Directors

SAN ANTONIO – ASHRAE has installed new officers and directors for 2012-13 at its Annual Meeting being held here June 23-27.

The new president is Thomas E. Watson, P.E., Fellow Life Member, chief engineer, McQuay International, Staunton, Va. His presidential theme is Broadening ASHRAE's Horizons, which emphasizes the role of ASHRAE members as leaders in the application of sustainable design and practices in our communities worldwide. "Let us build on a strong heritage as a technical society and broaden the application of our technology to serve humanity and promote a sustainable world," he said. "We must look at broadening our technology, our applications and our people."

Other officers installed for a one-year term are:

- President-Elect: William "Bill" P. Bahnfleth, Ph.D., P.E., Fellow ASHRAE, professor, The Pennsylvania State University, University Park, Pa.
- Treasurer: Thomas "Tom" H. Phoenix, P.E., Fellow ASHRAE, ASHRAE-Certified Building Energy Assessment and Building Energy Modeling Professional, principal and vice president, Moser Mayer Phoenix Associates, Greensboro, N.C.
- Vice President: Constantinos A. Balaras, Ph.D., P.E., Fellow ASHRAE, research director at the Institute for Environmental Research and Sustainable Development, National Observatory of Athens, Greece
- Vice President: Daniel C. Pettway, sales representative, Hobbs and Associates, Norfolk, Va.
- Vice President: Timothy G. Wentz, P.E., Fellow ASHRAE, ASHRAE-Certified High Performance Building Design Professional, associate professor, University of Nebraska – Lincoln.
- Vice President: Thomas E. Werkema, senior consultant, Arkema Inc., Knoxville, Tenn.

ASHRAE installed the following directors to serve a three-year term from 2012-2015:

- Region I Director and Regional Chair: Joseph L. Furman, senior sales engineer, Automated Logic, Wallingford, Conn.
- Region II Director and Regional Chair: Isabelle Lavoie, P.E., branch account manager systems and HVAC, Province of Quebec, Johnson Controls, Saint-Laurent, Quebec, Canada
- Region III Director and Regional Chair: Paul E. Petrilli, P.E., principal, H.F. Lenz Co., Johnstown, Pa.
- Region XI Director and Regional Chair: Kevin L. Marple, president, Benz Air Engineering Co., Inc., Portland, Ore.
- Director-at-Large: Charles H. Culp III, Ph.D., P.E., Fellow ASHRAE, ASHRAE-Certified High Performance Building Design Professional, professor, Texas A&M University, College Station, Texas.
- Director-at-Large: Kirk T. Mescher, P.E., principal, CM Engineering Inc., Columbia, Mo.
- Director-at-Large: Dennis J. Wessel, P.E., Fellow ASHRAE, senior vice president, Karpinski Engineering, Cleveland, Ohio.

ASHRAE Announces Call for Papers for Research Summit

ATLANTA – ASHRAE has announced a call for research papers for a newly created Research Summit to be held in conjunction with the Society's 2013 Annual Conference in Denver, Colo., June 22-26.

The presentation of research-related papers is a part of the overall Research Summit, which will also encompass keynote speakers, forums, panel discussions and seminars. Also, other sessions of interest to the research community will be presented, including how to apply for ASHRAE research funding. The purpose of the conference is to bring together distinguished researchers to present and discuss the latest research results, innovative research techniques, and forecast future research directions. Individuals from government agencies also will be invited to discuss research funding opportunities.

Technical papers are sought that describe completed and ongoing research, addressing broad areas in HVAC&R research and building science, which seeks to address the broader areas outside of the HVAC&R and how buildings systems perform. Furthermore, papers related to renewable energy research and its role in the industry's movement toward a clean energy economy are highly encouraged.

Of course ASHRAE-related research articles related to building system design and performance are appropriate since the Society spends \$2.5 million annually on research projects.

ASHRAE offers two types of paper submissions:

- Conference Papers: Abstracts due Sept. 24, 2012. Upon acceptance, papers will be due Jan. 14, 2013. These "final" papers undergo a single-blind review, are submitted as a PDF and have an eight single-spaced page maximum length.
- Full Technical Papers: Full papers are due Sept. 24, 2012. These papers undergo a rigorous double-blind review and can be a maximum of 30 double-spaced pages. Accepted technical papers are published in ASHRAE Transactions. Authors of papers published in Transactions may be invited to submit expanded papers for publication consideration in HVAC&R Research, ASHRAE's journal for archival research. ASHRAE Transactions papers are cited in the Thomson Reuters Web of Knowledge Index of Scientific & Technical Proceedings, Index to Scientific Books and Current Contents Proceedings: Engineering, Technology, Applied Physics. ASHRAE Transactions papers are also cited in SciVerse Scopus and COMPENDEX.

In addition to Research, the 2013 ASHRAE Annual Conference seeks papers addressing the core HVAC&R Systems and Equipment, and Fundamentals and Applications advances and practices, as well as for tracks on Integrated Project Delivery (IPD), Building Energy Modeling vs. Measurement and Verification, and Mile-High Efficiency and Equipment.

To submit a conference paper abstract or a technical paper and for more information about the 2013 ASHRAE Annual Conference, go to www.ashrae.org/Denver.

ASHRAE Announces Fall Online Courses

ATLANTA – A full slate of online courses touching on a range of built environment topics is being offered by ASHRAE this fall.

The 11 ASHRAE Learning Institute courses provide professional development through in-depth information that is timely, practical and targeted to provide engineers in consulting practices, facility management or supplier support with instruction on applying ASHRAE standards and employing new technologies essential for advanced building performance. The online courses allow attendees to learn from anywhere with an Internet connection. Course participants earn continuing education credits and qualify for Professional Development Hours for each course completed. Courses are instructor-led, drawing upon professional knowledge of leading practitioners.

The courses are:

- District Cooling and Heating Systems: Central Plants, Sept. 10
- The Commissioning Process and Guideline 0, The Commissioning Process (co-sponsored with the Building Commissioning Association, Illuminating Engineering Society and National Environmental Balancing Bureau), Sept. 24
- Basics of Air-to-Air Energy Recovery, Sept. 26
- Basics of High-Performance Building Design, Oct. 8
- Advanced High-Performance Building Design, Oct. 10
- Complying with ANSI/ASHRAE/IES Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings: HVAC/Mechanical, Oct. 15
- Complying with Standard 90.1-2010: Envelope/Lighting, Oct. 17
- Fundamental Requirements of ANSI/ASHRAE Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality, Oct. 22
- Energy Management in New and Existing Buildings, Oct. 24
- Energy Modeling Best Practices and Applications: HVAC/Thermal – Parts 1 and 2, Sept. 11 and 13
- Implementing ANSI/ASHRAE/USGBC/IES Standard 189.1-2011, Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings, Parts 1 and 2, Sept. 17 and 19

For registration costs and to register, visit www.ashrae.org/onlinecourses. Site licenses are available to organizations that have five or more course participants. For more information, e-mail edu@ashrae.org or call 678-539-1146.

ASHRAE Launches New Student Engineering Challenge

ATLANTA – A new student design competition from ASHRAE is focused on taking advantage of today's technology to provide simple, affordable solutions that benefit people around the world.

The 2013 Applied Engineering Challenge is for the design of a solar powered (or powered by another renewable source) portable refrigeration unit with a holding volume of 1

cubic foot. This device could be used to transport small essential cargo (perishable foods, pharmaceuticals, organs, sensitive equipment, etc.). The temperature inside the box must be maintained at 25 F (or -4 C) continuously without an external power supply, in an ambient environment of 100 F (or 38 C). This device must be easily made anywhere in the world, especially in developing economies.

The new competition was developed under the 2012-13 ASHRAE theme, Broadening ASHRAE's Horizons, of President Tom Watson, P.E., Fellow ASHRAE. The theme emphasizes the role of ASHRAE members as leaders in the application of sustainable design and practices in communities worldwide.

"I'm asking ASHRAE and the industry to look at technology that can be applied throughout the globe in applications that are simple, affordable and easy to use," Watson said. "Specifically with the Applied Engineering Challenge, we're looking for technologies that can be built very inexpensively and effectively and provide an immediate benefit to people around the world."

Watson said he hopes to attract students around the world at traditional engineering schools and also students at other institutions such as technical schools that may not have been heavily involved with ASHRAE.

The deadline for entry is June 2, 2013. For more information, visit www.ashrae.org/engineeringchallenge.

ASHRAE Names New Distinguished Lecturers

ATLANTA – ASHRAE has named 11 new Distinguished Lecturers who provide Society chapters with noted authorities and speak on relevant topics that impact the built environment industry.

This marks the 13th year of the Distinguished Lecturer Program, with over 1200 lectures given since the program began in 1999. The total 76 Lecturers for the 2012-13 Society year represent 14 countries, including Argentina, Canada, Egypt, Hong Kong, India, Lebanon, Malaysia, Mexico, Singapore, Sri Lanka, Taiwan, Thailand, United Kingdom and United States. These lecturers are available to present on 330 topics and speak a combined eight languages.

The new lecturers and their presentation topics are:

- Devin A. Abellon, P.E., Uponor North America, Phoenix, Ariz. – "Using Embedded Tube Radiant Cooling Systems to Maximize Leadership in Energy and Environmental Design® (LEED) Points."
- Lew Harriman, Fellow ASHRAE, director of research, Mason-Grant Consulting, Portsmouth, N.H. – "Better Buildings in Hot and Humid Climates – New ASHRAE Design Guidance," "Diagnosing and Fixing Humidity Control Problems in Real-World Buildings – Tools, Techniques, Case Histories and Practical Suggestions," "Real-World Integrated Design – Case Histories of Both Productive and Problematic Interactions Between Architectural Designs and HVAC Systems," "ASHRAE Position Document: Limiting Indoor Mold and Dampness in Buildings," "Humidity Control Design – Current ASHRAE Guidance and Suggestions for Simpler Solutions," "Building Diagnostics Using Thermal Imaging – Practical Tools,

Techniques and Case Histories,” “Case Histories – Low-Cost, Web-based Remote Datalogging of Building Moisture and Control of Single-zone HVAC Systems” and “State-of-the-Art Residential Energy Retrofits - Best Practices for Single-Family Homes.”

- Yuguo Li, Ph.D., Fellow ASHRAE, Department of Mechanical Engineering, The University of Hong Kong, Hong Kong – “Building Ventilation and Infection,” “Effective Ventilation Systems for Airborne Infection Isolation Rooms,” “Use of Natural and Hybrid Ventilation for Better Indoor Air Quality and Energy Efficiency” and “Amoy Garden SARS Outbreak – the Roles of Air Flow and Ventilation.”
- Alan Niles, Western region commercial sales manager, WaterFurnace International, Gig Harbor, Wash. – “Design and Economics of Commercial Ground Loop Heat Pump Systems.”
- Presidential Member Richard H. Rooley, FREng, Fellow ASHRAE, ASHRAE-Certified Operations and Performance Management Professional, owner, Rooley Consultants, Bucks, England, United Kingdom – “Leadership and Management for Engineers – How to Achieve Profit,” “Worst Practice Lessons for Sustainability” and “Quality of the Internal Workplace and Worker Productivity: A Look Beyond Engineering.”
- Jerry M. Sipes, Ph.D., P.E., vice president of engineering, Price Industries Inc., Suwanee, Ga. – “Active, Passive Beams and Sails for Heating and Cooling Occupied Spaces,” “Acoustical Impact of Terminal Unit Liner Types,” “Fundamentals of Displacement Ventilation” and “Impact of Diffuser Inlet Conditions on Overhead Mixing Air Distribution”
- Om Taneja, Ph.D., P.E., associate director, Service Centers Division, U.S. General Services Administration, Region 2, New York City, N.Y. – “Strategies For Transformation Of Facilities Management To Foster Economically, Environmentally And Socially Sustainable Buildings,” “Improved Operations and Maintenance Measures for better Energy Performance and Environmental Impact of Chiller Plants for Federal Buildings in the United States” and “Analytical, Performance and Prescriptive Measure for Life Cycle assessment of Facilities Projects.”
- Mohammad Tassi, Facilities Planning and Design Unit, American University of Beirut, Beirut, Lebanon – “Green Buildings and LEED Rating System,” “Energy and Water Requirements in LEED NC 2009 Rating System” and “Indoor Environmental Quality Requirements in LEED NC 2009 Rating System.”
- T. David Underwood, P.Eng., ASHRAE Fellow, ASHRAE-Certified Commissioning Process Management Professional, Underwood & Associates, Oakville, Ontario, Canada – “Career Opportunities For Students in ASHRAE,” “Commissioning Tips Tricks and Techniques,” “Introduction to Standard 189.1-2011, Green Building Design and Integrated Design Approach,” “The Introduction to Building Energy Quotient (bEQ) Program” and “Applying Standard 180-2008, Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems.”
- Lily M. Wang, Ph.D., P.E., associate professor, University of Nebraska – Lincoln, Omaha, Neb. – “Acoustics That Make the Grade: Improving Sound Performance in Classroom Environments” and “How Does HVAC Noise Affect Worker Comfort and Performance?”
- Douglas F. Zentz, associate professor and program coordinator for the HVACR programs within the College of Engineering Technology at Ferris State University, Big Rapids, Mich. – “What’s Your EUI?,” “Standard 189.1, Standard for the Design of High Performance Buildings Except Low-Rise Residential,” “How to Communicate Technically in a Professional World with Technical Information,” “Sustaining ASHRAE Through Leadership, Mentoring Our Future,” “Applied Psychrometrics” and “HVAC and Energy Efficiency.”

For a complete listing of Distinguished Lecturers and detailed procedures on how to arrange a lecturer presentation, visit www.ashrae.org/distinguishedlecturers.

For additional information, contact Rosy Douglas, manager of chapter programs, at rdouglas@ashrae.org or 678-539-1128.



UPCOMING EVENTS

ENERGY MODELING CONFERENCE

October 1–3, 2012 | Atlanta, Georgia

www.ashrae.org/emc2012

Hands-on content for energy modelers.



ASHRAE

ENERGY MODELING CONFERENCE

Tools for Designing
High Performance Buildings
October 1–3, 2012

ASHRAE/NIST REFRIGERANTS CONFERENCE

October 29–30, 2012 | Gaithersburg, Maryland

www.ashrae.org/refrigerants2012

New low GWP fluorochemical refrigerants and equipment
applications for low GWP alternatives.



NIST
National Institute of
Standards and Technology
U.S. Department of Commerce

7th INTERNATIONAL COLD CLIMATE HVAC CONFERENCE

November 12–14, 2012 | Calgary, Alberta

www.ashrae.org/coldclimate

International applications and innovations in cold climate
HVAC design.



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Virtual Conference—if you can't make it to Dallas, take advantage of the knowledge shared in the technical program with the Virtual Conference

AHR Expo—The ASHRAE co-sponsored AHR Expo takes place Jan. 28-30 at the Dallas Convention Center. www.ahrexpo.com

ASHRAE Certification—all six certification programs are being offered: Building Energy Assessment Professional; Building Energy Modeling Professional; Commissioning Process Management Professional; High-Performance Building Design Professional; Healthcare Facility Design Professional; and Operations and Performance Management Professional.

ASHRAE Learning Institute—five Professional Development Seminars and 15 Short Courses are offered, including new courses on the air-to-air energy recovery, ultraviolet germicidal irradiation systems, combined heat and power efficiency, laboratory design and HVAC systems optimization.



www.ashrae.org/dallas

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DIRECTIONS: I84 East to Exit 59A, Turn right at the end of the ramp onto Eisenman Rd., Take the second left to enter the employee parking lot. Do not enter the truck entrance at Freight St.