AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS INC.

LONDON CANADA CHAPTER #116

TOPIC:

THE LINK BETWEEN CONTINUOUS COMMISSIONING AND SUSTAINABLE GROWTH: A SUSTAINABLE BUSINESS MODEL

Mr Phil Cook, CET, MBA, LEED AP
Comprehensive Solutions Account Executive
Trane

Meeting - MONDAY JAN 24/2011

MEMBERSHIP NIGHT

Best Western / Lamplighter Inn
591 Wellington Rd., London

4:00pm - BOG Meeting

5:15pm Social 6:00pm-Dinner
7:15pm - Program

$35.00 for London Chapter dues paid members
or $175.00 for meal plan

$10.00 for Students with valid student card

$45.00 for others

President's Message

Happy New Year, I hope everyone had a great Christmas Holiday. At least we had snow for Christmas for the kids to enjoy.

I would like to thank all the chapter members for your support for the first half of the ASHRAE year, our attendance was up per meeting, we were able to get allot of students out, we have had some good speakers and our second half looks to be just as good.

We will start off our second half with Membership Night at the Lamplighter Inn, I encourage all members to bring someone out with them who either has never been to a ASHRAE meeting or someone you think will benefit from the meeting it would be great to keep our numbers up per meeting so thank you in advanced.

Our speaker this month is Phillip Cook formerly of Honeywell and will be talking about What Net Operating Income Is and How To Calculate.

Don't forget about the AHR Expo in Las Vegas from January 31st to February 2nd you get all the details on the show @ www.ahrexpo.com

I look forward to seeing all of you this month at the meeting and remember the meeting is a week early on Monday the 24th because of the AHR Expo.

Jason Vandenberghe
President – ASHRAE London Canada

Jan Speaker

Phil Cook has over 20 years experience working in the building systems industry in various capacities working for companies such as Engineered Air, Crouse Hinds, Honeywell and most Recently Ingersoll Rand (Trane). Mr. Cook is a Certified Engineering Technologist and has a Master of Business Administration Degree with a concentration in Sustainable Development from the Athabasca University. Mr. Cook has coauthored two papers with Dr. Anshuman Khare including "The Academia - Corporate on Campus Sustainability Collaboration" and "The link between continuous commissioning and sustainable growth: a sustainable business model". Phil is a long term member of ASHRAE and is LEED AP certified.

Nov Meeting Summary

The November Dinner meeting was held at Moxies Classic Grill in downtown London for a change of venue.

This meeting was tagged as an ASHRAE Research Night, and featured an ASHRAE Research Information Display, along with a mockup printing of the current ASHRAE Fundamentals Manual – showing how much of a contribution to the manual that ASHRAE Research provides – a good 2/3 of the text in the manual was blacked out.

Those of you who attended will remember that we had an excellent turnout with a total number of approximately 45 – comprised of members and guests, and with a good UWO student member turnout.

The topic was on Solar Photovoltaic Technology in Canada – presented by Michael LeBoldus – VP & General Manager of Mitsubishi Electric Sales Canada Inc. Solar PV Division. His presentation gave a good overview of the Solar industry market, and drew a number of questions and interest from the audience.

A few of the attendees remained after the meeting ended to watch the Monday Night Football Game in the comfort of the Moxies upstairs lounge.

Don't forget to contribute to ASHRAE Research this year…

Eric W. Shaw
Research Chair – ASHRAE London Canada

Student Activities

Our student chapter has been very busy the last few months getting organized and structured. We have formed a very active on campus club with a dedicated group of students who are working hard on establishing ASHRAE's presence on campus. In addition to developing the overall student chapter, we have split the club into four active sub-groups:

Promotional Group: promote the student chapter to the university community through presentations and setting up booths at different events at the university. On that note, we have 26 new students signed up for membership. Also, the group is dedicated at promoting ASHRAE in highschools through interactive events.

ASHRAE Competition Group: The groups is currently working on design, focusing on heating/cooling load calculations; as well as, the integration of such systems throughout The Drake Well Museum in Titusville, Pennsylvania.

Air Handling Unit Group: The team is working on fixing an old AHU, with future plans of updating the DAQ system.

Green Building Group: Works on analyzing the on-campus green building, looking specifically at the performance of the geothermal pumps in the system.

Finally, We would like to thank for our student chapter for the amazing turnout through out the first ASHRAE half year.

Khalid El-Kadri, BESc.
Student Activities Chair - ASHRAE London Canada

Geothermal Heat Pumps will be the subject the next free ASHRAE Chapter Technology Transfer Committee (CTTC) Webcast scheduled for April 21, 2011.

Jan Topic

THE LINK BETWEEN CONTINUOUS COMMISSIONING AND SUSTAINABLE GROWTH: A SUSTAINABLE BUSINESS MODEL

Over 40% of the greenhouse gas (GHG) production in the world can be attributed to our buildings (Sisson and van Aerschot, 2007). Recent legislation and standards will lead to the construction of more sustainable buildings and zero energy buildings. However, what are we to do with all of the existing buildings? Continuous commissioning (CCx) is a process of commissioning a building to a base point and then operating it with a continuous monitoring regime grouped with a regime of preventative maintenance to optimize energy consumption, environmental comfort, security, indoor air quality, water consumption, etc.

The course of the talk follows a natural progression through a description of CCx and the path for implementation, and an overview of sustainable growth for the corporation. An exploration of the environmental, economic and social benefits and the interplay or 'link' between the two follows. Finally, the talk covers the possible drawbacks of the union between sustainable growth and CCx. The talk concludes supporting the legitimacy and feasibility of the link between CCx and sustainable growth for the corporation. The topic is limited to the evaluation of the existing building as a business model and it is concluded that this 'link' is specific, measurable, achievable, reasonable and timely.

MEMBERSHIP

Did you know that as a member of ASHRAE you are one of 51,000 members of the world's leading organization for HVAC&R professionals found in 137 countries with 174 chapters working on 78 research initiatives and 119 standards and guidelines through 104 technical committees?

Did you know that member benefits more than just the ASHRAE Handbooks & Journal, both indispensable, industry-wide resources with trusted technical information for HVAC&R professionals? Members also have access to:

- High Performing Buildings — the quarterly magazine for innovation in building technology design and operation
- HVAC Industry News — a weekly news resource keeping ASHRAE members abreast of the latest industry news and information
- Over 300 technical publications
- Online education and webcasts
- Professional certification in Healthcare Facility Design, High-Performance Building Design, Operations & Performance Management, Commissioning Process Management & Building Energy Modeling

And let's not forget that members also have the opportunity of networking monthly with other local HVAC&R professionals at Chapter meeting to exchange ideas and discuss regional issues.

With all these benefits and more, doesn't it make sense to invite a colleague, business partner or friend to become a member of ASHRAE and join in on this world of opportunity? Consider invite them to join you for a night at a Chapter meeting so they can see first-hand what it's all about. Or even better, encourage them to complete an application for membership at ***www.ashrae.org/members*** and soon they will reap the rewards of becoming a member of ASHRAE.

And don't forget, to remain a member of good standing you must pay your annual dues within 90 days on your membership renewal or risk losing out on all the benefits of ASHRAE. Please renew today.

Best Regards,
Scott Edmunds
Membership Chair - ASHRAE London Canada Chapter

Upcoming Meetings and Events

Jan 29 - Feb 2/2011: ASHRAE 2011 Winter Conference, Las Vegas Nevada (www.ashrae.org)

Mon Feb 28/2011 - Windermere Manor - UWO (Student Night): Noise Control for Schools - Patrick Oilver, EH Price
Mon Mar 28/2011 (location: tbd): Research Night - Technical Tour

Mon Apr 13/2011 (***NOTE DATE***) BestWestern - Lamplighter Inn:
Green Bldg Design & Assessment - Dr. Sam Hui, PH.D.,CENG,CEM, Dept of Mechanical Design, University of Hong Kong
ASHRAE Distinguished Lecturer

April 21/2011: ASHRAE Webcast: Ground Source Heat Pump Systems – Putting the Earth to Work for You (www.ashrae.org)

2010 Energy Standard Provides for 20 Percent-Plus Energy Savings

ATLANTA – By following the guidance in the newly published 2010 energy standard from ASHRAE and IES, more than 20 percent energy reduction can be achieved over savings in the 2004 standard.

"This year marks the 35th anniversary of our flagship energy conservation standard, and the 2010 version of 90.1 represents a milestone achievement in increased energy and cost savings," Lynn G. Bellenger, ASHRAE president, said. "Working within the constraints of strict economic justification and a prescriptive format, the project committee has achieved remarkable energy savings across all building types and U.S. climate zones. The standard is written in mandatory code language and offers code bodies the opportunity to make a significant improvement in the energy efficiency of new buildings, additions and major renovations. We congratulate the project team and our partners of 35 years, the Illuminating Engineering Society."

"IES is pleased to continue in its role as a partner with ASHRAE in this 2010 edition of standard 90.1," Rita M. Harrold,director of technology, said. "Each revision brings new challenges to find ways to reduce energy. Our congratulations to the project committee for its diligence in identifying and demonstrating significant energy savings opportunities compared to the 2004 standard. IES contributions to the savings have been achieved by refining lighting power limits and placing more emphasis on controls and system energy use. We look forward to participating in future versions of the standard where even more focus will be placed on how we can support the goal of designing quality lighting while balancing human needs with energy and cost savings in all building types."

ANSI/ASHRAE/IES Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings, provides minimum requirements for the energy-efficient design of buildings except low-rise residential buildings. The standard contains 109 addenda approved since the 2007 standard was published.

At the time of publication, the energy cost savings of the new standard vs. the 2004 standard are estimated to be more than 20 percent. Not all addenda have been included in analysis for these energy savings estimates. Final savings estimates will be issued by ASHRAE when available.

How was the energy reduction achieved? Here are a few examples:

· The Scope was expanded so that 90.1 covers receptacles and process loads, including data centers. This allows future addenda to the standard to address energy consuming equipment and systems previously outside its scope.
· Continuous air barrier and cool/high albedo roof requirements were added.
· Lighting: Most interior Lighting Power Densities were lowered, and additional occupant sensing controls and mandatory daylighting requirements were added for specific spaces, along with a new five-zone exterior Lighting Power Density table.
· Mechanical: Most equipment efficiencies are higher, energy recovery is required in more applications, economizers are required in more climates and more energy-conserving controls are required.
· Modeling requirements have been clarified and expanded so that building modelers can more accurately compare energy cost of their building project with an appropriate baseline building as defined by the standard.

"The 2010 edition of Standard 90.1 represents a significant accomplishment by ASHRAE and IES to implement cost-effective measures for energy conservation in new buildings designed using the standard," Steve Skalko, 90.1 committee chair, said.

Since being developed in response to the energy crisis in the 1970s, Standard 90.1 has become the basis for building codes, and the standard for building design and construction throughout the United States.

The cost of 90.1-2010 is $125 ($106, members). The standard is currently available as a PDF download with hard copies slated to be available for purchase later in November. Hard copies are now available for pre-order. To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide) or visit www.ashrae.org/bookstore.

ASHRAE Awards NIST Grant to Study IAQ in Retail Stores

ATLANTA – Research on improving ventilation and indoor air quality in big box retail stores has begun under a research project awarded by ASHRAE and funded with a $1.5 million grant from the National Institute of Standards and Technology (NIST) as part of the 2009 Recovery Act Measurement Science and Engineering Research Grants Program.

Given that there are some 14.6 billion ft2 of retail space in the United States where people shop up to 24/7, it is vital that ventilation systems operate as efficiently as possible while maintaining good indoor air quality. Currently, there is little published information about air quality and ventilation rates in retail spaces. Ventilation requirements for retail and other space types have been set largely by data for commercial office buildings. The three-year project, Ventilation and Indoor Air quality in Retail Stores, is one of 27 projects funded by NIST for measurement science and engineering research. ASHRAE awarded the project under a collaboration to principal investigator Dr. Jeffrey Siegel at the University of Texas at Austin and co-investigator Dr. Jelena Srebric at Penn State University. Siegel is an associate professor and J. Neils Thompson Centennial Teaching Fellow in Civil Engineering, Department of Civil, Architectural and Environmental Engineering.

The building measurements will take place in at least 16 buildings – general merchandise, department, supermarket, restaurant and home improvement/hardware. Half of the buildings will be located in the hot and humid climate of central Texas and the other half in the cold and dry climate of central Pennsylvania. The results will provide a more rigorous basis for the ventilation rate requirements in retail spaces and provide incentives for improved maintenance if it can be shown that well-maintained spaces lead to lower pollutant concentrations and improve the perception of good air quality. The project started in September and is slated to end in December 2012.

Newest Version of Thermal Comfort Standard Provides New Provisions on Elevated Air Speeds

ATLANTA – New requirements regarding air speeds, analysis and documentation are included in the newly published ASHRAE thermal comfort standard, ANSI/ASHRAE Standard 55-2010, Thermal Environmental Conditions for Human Occupancy.

"The standard continues to focus on defining the range of indoor thermal environmental conditions acceptable to a majority of occupants, while also accommodating an ever increasing variety of design solutions intended to provide comfort and to respect today's imperative for sustainable buildings," Stephen Turner, of the Standard 55 Committee, said.

The standard specifies the combinations of indoor thermal environmental factors and personal factors that will produce thermal environmental conditions acceptable to a majority of the occupants within the space.

Standard 55 incorporates recent research innovations such as the use of elevated air speeds to widen the acceptable range of thermal conditions. The standard previously allowed modest increases in operative temperature beyond the Predicted Mean Vote/Percentage of Persons Dissatisfied (PMV/PPD) limits as a function of air speed and turbulence intensity.

The 2010 standard also includes a new method for determining the cooling effect of air movement above 0.15 m/s (30 fpm). This allows ceiling fans, or other means to elevate airspeed, to provide comfort at higher summer temperatures than were previously permissible. New provisions based on field study research allow elevated air speed to broadly offset the need to cool the air in warm conditions, replacing requirements that originated primarily from climate chamber studies.

Another revision makes clearer the mandatory minimum requirements for analysis and documentation of a design to show that it meets the standard's requirements. In addition, a compliance form for documentation of design is included in an informative appendix. This compliance template mirrors the United States Green Building Council's LEED® template for the thermal comfort design credit in LEED New Constuction-2009, simplifying the LEED credit template for the designer during a project.

The 2010 version of the standard also includes improved and expanded graphics that better guide users of the standard in simple applications. Improvements to the SI and IP versions of the traditional "comfort zone" chart include enlargement, clarification and notes to aid users of the standard.

Standard 55 combines Standard 55-2004 and the 10 approved and published addenda to the 2004 edition into one easy-to-use, consolidated standard.

The cost of Standard 55 is $69 ($59, 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 Brings Hot Topics to AHR Expo Attendees

ATLANTA – Guidance on industry hot topics is being provided from ASHRAE through two free sessions at the AHR Expo® in Las Vegas, Nev.

A Practical Guide for Reducing Air Leakage in HVAC Air Systems takes place Monday, Jan. 31, 2:15-3:45 p.m., while an update on Standard 90.1 – 2010 Update: How It Affects You takes place on Tuesday, Feb. 1, 2:15-3:45 p.m. The two sessions offer Show attendees 1.5 PDHs each for a total of 3.

Monday's session focuses on the fact that excessive air leakage in HVAC systems is known to be a significant source of energy waste. This session identifies the current standards, guidelines and project specification that influence air leakage and highlights the roles and responsibilities of the engineer, contractor and manufacturer to assure they meet our common goal of reducing air leakage in HVAC systems.

The Tuesday session provides an update on ANSI/ASHRAE/IESNA Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings. With well over 100 addenda incorporated since the 2007 edition, this session highlights some of the major changes in 2010 standard.

Both sessions are held in Room N256 of the Las Vegas Convention Center. No ticket or badge is required for admittance.

The 2011 ASHRAE Winter Conference is held in conjunction with the Expo and runs Jan. 29-Feb. 2 at the Las Vegas Hilton. Additional courses and sessions are offered through the Conference's Technical Program and the ASHRAE Learning Institute. More information can be found at www.ashrae.org/lasvegas.

International Code Council (ICC) Takes Action on ASHRAE Proposals

ATLANTA – International building codes will incorporate requirements from a new load calculation standard from ASHRAE and ACCA as well as match requirements from Standard 90.1 under several recent proposals recently approved by the ICC membership.

Final action hearings took place during the last week of October to determine the final disposition on ASHRAE proposals to the ICC, which develops model codes that may be adopted by code jurisdictions in the United States or internationally. The actions taken will next appear in the 2012 I-Codes – due out in April 2011. Under a proposal to the International Mechanical Code (IMC), inspection and maintenance of HVAC systems will be required by ANSI/ASHRAE/ACCA Standard 180-2009, Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems. The standard establishes minimum requirements for inspection and maintenance of HVAC systems to ensure proper functionality which will save energy and money for the building owner in addition to preventing potential accidents by failing systems. Also approved were proposed changes regarding energy stringency based on requirements in ANSI/ASHRAE/IES Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings.

Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings - User's Manual

ATLANTA—Knowing what to do is not the same as knowing how. A new User's Manual educates industry professionals on how to meet the requirements of a green building standard published by three leading industry organizations.

Standard 189.1-2009, Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings, was published earlier this year by ASHRAE in conjunction with the Illuminating Engineering Society of North America (IES) and the U.S. Green Building Council (USGBC). The standard provides a long-needed green building foundation for those who strive to design, build and operate green buildings.

A newly published User's Manual is now available.

"Because of the breadth of the key topic areas covered in the standard – site sustainability, water use efficiency, energy ef-ficiency, indoor environmental quality and the building's impact on the atmosphere, materials and resources – it is important for users to have a thorough understanding of how they come together to create a sustainable building," Kent Peterson, former chair of the Standard 189.1 committee, said. "The User's Manual aids architects and engineers in applying the standard to design; general and specialty contractors in constructing buildings that are in compliance; and plan examiners and field inspectors in enforcing the standard where adopted into code."

The new User's Manual provides explanations of the standard's requirements and examples of its application. It contains sample calculations, forms to demonstrate compliance and references to helpful resources and websites. This User's Manual can also be suitable for use in educational programs.

For complete information on the standard, including a readable copy, visit www.ashrae.org/greenstandard.

Standard 189.1 also serves as jurisdictional compliance option to the International Green Construction Code authored by the International Code Council, ASTM International and the American Institute of Architects.

ASHRAE Applauds Signing of Federal Buildings Personnel Training Law of 2010

ATLANTA – Federal legislation signed into law this week will provide training for federal building personnel in the areas of building operations and maintenance, energy management, safety and design functions.

On Tuesday, Dec. 14, President Obama signed the Federal Buildings Personnel Training Act. The Act was introduced in April by Reps. Russ Carnahan (D-Mo.) and Judy Biggert (R-Il.) and Sen. Tom Carper (D-De.) and Susan Collins (R-Me.). It was supported by more than 33 leading organizations involved in the design, construction, operation and maintenance of buildings, including ASHRAE.

The legislation will help provide federal workers with the necessary training to construct and maintain environmentally sound buildings. Federal workers will be able to be trained in a series of core competencies relating to building operations, maintenance, energy management, and safety and future performance. Workers can take courses and be able to obtain licenses and certification for their efforts.

"This law is a significant advancement for the design, construction, operation and maintenance of our nation's federal buildings," Lynn G. Bellenger, ASHRAE president, said. "ASHRAE applauds the federal government for demonstrating what can be accomplished in building and maintaining energy efficient buildings with excellent indoor environmental quality."

ASHRAE: Standard 189.1 Adopted as Part of Army Sustainability Policy

ATLANTA – ASHRAE leaders recently met with U.S. Army officials regarding a new sustainable design and development policy that incorporates requirements of the green building standard developed by the Society, USGBC and IES.

The U.S. Army has made it a matter of policy to promote sustainability and improve green building standards for its facilities. On Oct. 27, 2010, Katherine Hammack, assistant secretary of the Army for installations, energy and the environment (IE&E), issued a policy memorandum that incorporates ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings.

The Army's policy sets a new approach to the design and construction of efficient military construction projects and major renovations by using Standard 189.1 as the baseline. The policy requires that facility construction projects follow specified requirements and guidance in the standard. These requirements address siting, energy efficiency, cool roofs, metering, storm water management and indoor and outdoor water consumption.

The net effect of the Army's sustainable design initiative is likely to be immense. The policy applies to all construction and renovation of new buildings and structures in the U.S. territories, permanent overseas Active Army installations, Army Reserve Centers, Army National Guard facilities and Armed Forces Reserve Centers. The footprint of the existing Army buildings and structures worldwide covers more than 954 million square feet.

ASHRAE leadership and Army officials discussed how the Society could continue development and stringency of Standard 189.1 to provide guidance toward net-zero buildings. Additionally discussed were how ASHRAE can help fulfill the Army's training needs regarding the standard and how 189.1 fits in to Army's long-term plans to make their facilities more sustainable Standard 189.1, published earlier this year by ASHRAE in conjunction with the Illuminating Engineering Society of North America (IES) and the U.S. Green Building Council (USGBC), provides a long-needed green building foundation for those who strive to design, build and operate green buildings.

Standard 189.1 also serves as jurisdictional compliance option to the International Green Construction Code authored by the International Code Council, ASTM International and the American Institute of Architects.

ASHRAE Handbook: A Reliable Resource for Refrigeration

ATLANTA – The diversity of refrigeration from ice rinks to refrigerant containment to freezing fruits and vegetables is covered in the latest Handbook volume from ASHRAE.

The 2010 ASHRAE Handbook – Refrigeration, covers the refrigeration equipment and systems for applications other than human comfort. It includes information on cooling, freezing, and storing food; industrial applications of refrigeration; and low-temperature refrigeration.

"The Handbook gives the industry a primer in a wide variety of refrigeration topics, such as storing and transporting fruit, cryosurgery, ice-skating rinks, slaughterhouses and concrete dams," said William McCartney, chair of the committee that oversaw writing of the volume. "While the Handbook is primarily a reference for the practicing engineer, the volume is also useful for anyone involved in cooling and storage of food products."

The volume contains two new chapters: Chapter 3, Carbon Dioxide Refrigeration Systems, describes the history of this "natural refrigerant" and why it is the subject of renewed interest today; Chapter 50, Terminology of Refrigeration, lists common terms used in industrial refrigeration systems.

Other changes include:

- Chapter 2, Ammonia Refrigeration Systems, has added guidance on avoiding hydraulic shock, on purging water and noncondensables, as well as on hot-gas defrost and defrost control.
- Chapter 6, Refrigerant System Chemistry, has added information on polyvinyl ether (PVE) lubricants and corrosion, plus updates for recent ASHRAE research on copper plating and material compatibility.
- Chapter 8, Equipment and System Dehydrating, Charging, and Testing, has new table data on dehydration and moisture-measuring methods and a revised section on performance testing.
- Chapter 9, Refrigerant Containment, Recovery, Recycling and Reclamation, has added a new table comparing sensitivities of various leak-detection methods and a procedure for receiver level monitoring.
- Chapter 11, Refrigerant-Control Devices, has updated information on electric expansion valves and discharge bypass valves, plus revised figures on thermostatic expansion valves (TXVs) and several revised examples.
- Chapter 12, Lubricants in Refrigerant Systems, has new content on pressure/viscosity coefficients, compressibility factors and lubricants' effects on system performance.
- Chapter 17, Household Refrigerators and Freezers, has been reorganized and updated for revised standards and new component technologies, including variable-speed and linear compressors, and has information on new configurations and functions, such as wine cooling units, rapid-chill/freeze/thaw and odor elimination. The section on performance evaluation has been revised and integrated with the section on standards.
- Chapter 25, Cargo Containers, Rail Cars, Trailers, and Trucks, has been updated with information on multitemperature compartments and air curtains.
- Chapter 38, Fruit Juice Concentrates and Chilled Juice Products, has added description of storage tank sterilization.
- Chapter 44, Ice Rinks, has extensive changes to the section on heat recovery and updated loads information based on ASHRAE research project RP-1289.

The cost of the 2010 ASHRAE Handbook – Refrigeration, which includes the CD is $195, in inch-pound (I-P) or the International System of Units (SI). The 2010 ASHRAE Handbook on CD, which contains both the I-P and SI editions, costs $155.

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 Publishes 2010 Residential IAQ Standard

ATLANTA – Changes to make requirements easier to use in home retrofits are covered in the newly published 2010 residential ventilation standard from ASHRAE.

ANSI/ASHRAE Standard 62.2-2010, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings, is the only nationally recognized indoor air quality standard developed solely for residences. It defines the roles of and minimum requirements for mechanical and natural ventilation systems and the building envelope intended to provide acceptable indoor air quality in low-rise residential buildings. The 2010 standard encourages home retrofits to improve indoor air quality through allowance of alternative methods for meeting the standard's requirements regarding kitchen and bathroom exhaust fans. The standard currently requires fans in those rooms.

"This change makes the standard much easier to use in home retrofits, which is very important considering massive federal and state government efforts in this area," Steven Emmerich, committee chair, said. "For example, installation of new equipment in some existing homes can be a barrier in terms of expense and practicality. Under the alternative compliance path, the overall whole-house ventilation rate can be increased to compensate for insufficient or non-existent bathroom exhaust."

The overall approach to residential ventilation in the standard has not changed since the 2007 version was published, such as whole house mechanical for most houses, local exhaust in baths and kitchens and some source control measures.

Additional improvements to the standard include more accurate factors for intermittent whole-house systems; changes to better limit unintended (potentially contaminated) air transfer from garages, leaky ducts, adjacent housing units, and other such spaces; and deletion of an exception for certain climates that had allowed the use of windows instead of fans given that studies have shown that windows are not used enough and are unreliable for ventilation.

The cost of Standard 62.2-2007 is $54 ($46, 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.
