



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

LONDON CANADA CHAPTER #116

<http://LondonCanada.AshraeChapters.org>

Mon Jan 30/2012

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Topic

NOISE CONTROL RESEARCH AND APPLICATIONS

Speaker

Duane McLennan, CET
Product Manager, Noise Control and Vibration
EH Price Ltd

AND PAST PRESIDENTS NIGHT

Meeting - Mon Jan 30/2012

>>> The HILTON <<<
300 King Street
London

4:00pm - Chapter Board of Governor's Meeting

5:30pm Social 6:00pm-Dinner
7:15pm - Program

\$45.00 for London Chapter dues paid members
or \$200.00 for meal plan

\$50.00 for others

\$10.00 Students with valid student card

<http://www.surveymonkey.com/s/TWK5GRB>
please register at SurveyMonkey site if you plan on attending the meeting



Presidents Message

Happy New Year everyone I hope all of you had a great Christmas holiday and enjoyed bringing in 2012. Welcome back to the second half of our ASHRAE year the BOG has planned some great events, booked some great speakers and yes we even started talking about the golf tournament.

As you know we are having our 2nd "Past Presidents Night" January 30th at the downtown Hilton. Karl and Scott have been making allot of phone calls to all our Past Presidents to ensure it's once again a great night, thanks to both of you for all your hard work.

This month in Chicago is the annual ASHRAE AHR Expo from January 23-25 for those of you who are attending the show please enjoy your selves take your time walking the show and there are lots of full day or half day seminars, free educational sessions and presentations and almost 2000 exhibitors you will need at least 2 days to walk this show.

Again welcome back and we look forward to seeing all of you on the 30th at the Hilton downtown for our Past Presidents Night.

Jason Vandenberghe
 Chapter President 2010/2012
 ASHRAE London Canada Chapter

January Speaker Bio

Duane McLennan, CET

Product Manager, Noise Control and Vibration - EH Price Ltd.

Duane has been with EH Price for 8 years, and has worked in the noise and control field for 14 years and has worked extensively in both the product application and product development of noise control products.

He most recently led development of the Price Industries line of acoustical products and oversaw the development and commissioning of the Price Sound Lab in Winnipeg, MB

November Summary

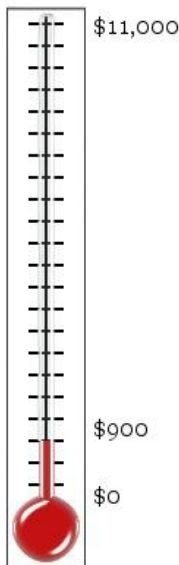
Stephen Dixon from TdS Dcixon spoke on Energy Reduction Tools and Good Practices. Stephen showed a few methods to review energy billings to show the measure implimented at a facility are maintaing the energy savings.

Research Promotion

ASHRAE Research needs your contribution. If you have not yet submitted, you can contact Eric who will ensure you get the proper credit.

Thank You to those that have already contributed.

Eric Shaw
 Chapter Research Chair 2010/2012
 ASHRAE London Canada Chapter



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Membership

Greetings from your Membership Promotion Committee,

We hope everyone has enjoyed a good start to the new year. We expect to see many of our regular attendees, as well as a few extra members, to participate in our Past President's Night this month. We are looking forward to our upcoming Membership Promotion meeting which will be a joint event hosted by ASHRAE London and the London Society of Architects. This event will give an overview of the changes to the Ontario Building Code through supplementary standard SB-10, which took effect on January 1st, 2012. This event is scheduled to take place on March 26th, 2012. Please stay tuned for more information on the details of the event.

We encourage members to invite coworkers and colleagues to attend our monthly meetings, to increase awareness of ASHRAE throughout the HVAC&R community. Also, feel free to pass along my contact information to anyone you may know who is interested in knowing more about ASHRAE or becoming a member.

A reminder to anyone who may be eligible for grade advancement to see the instructions included in the October Newsletter for details on how to advance your membership. Again, please feel free to contact me if you have any further questions on grade advancement.

We would like to welcome new members to the ASHRAE London membership and congratulate three of our current members on their grade advancement from associate to member grade.

NEW MEMBERS

Paul Campbell
Farshad Pousti
Bryan Flagel
Rishi Mirchandani
Edwin Liou

GRADE ADVANCEMENT

Richard Hammond
Tom Drennan
Karl Gilroy

Best Regards,
Jordan Foster
Chapter Membership Chair 2011/2012
ASHRAE London Canada Chapter

ASHRAE YEA EVENT - DECEMBER 2011

The first YEA (Young Engineers in ASHRAE) event of the season was held on December 8th at the Martini bar. It provided a great opportunity for people from various firms to acquaint themselves with other young professionals in London, and we hope to repeat the success of this event in the near future. All YEA events are open to engineers under the age of 35

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BACnet





MEMEBER BIO'S

Farshad Pousti

New ASHRAE Member

Graduated in 2002 with a Bachelor of Science in Mechanical Engineering program from Tehran, Iran. Worked for Alaveh INC. for close to 10 years as a Mechanical Engineer on various projects. Recently moved to Canada to start in a position with Armstrong with a temporary contract. Shortly thereafter, began in a position with Chorley + Bisset Consulting Engineers. I have always been familiar with ASHRAE and feel honoured to be welcomed as a member.

Rishi Mirchandani

New ASHRAE Member

Born and Raised in Indonesia, lived in Dubai for 4 years after Jakarta. Went to the University of Waterloo for Chemical Engineering, and did most of my co-op terms in Toronto that's when I got a wiff of HTS and here I am.

Karl Gilroy

Born in Amherst Nova Scotia and grew up in the small town of Joggins, Nova Scotia. Attended N.S.I.T. (Nova Scotia Institute of Technology) in Halifax where he received a diploma in Mechanical Engineering Technology. He also continued his education at Dalhousie University in Mechanical Engineering. Has worked in the HVAC industry for the past 18 years with E.H. Price. Started at E.H. Price in Dartmouth Nova Scotia, moved to Hamilton, then on to Toronto and has currently been in London for the past 8 years. Has been involved with ASHRAE since 2003 in various roles and currently is the VP / Program Chair for the local ASHRAE Chapter.

Richard Hammond

ASHRAE Grade Advancement

Richard Hammond is a graduate of the University of Waterloo and a Principal Architect with Cornerstone Architecture in London, Ontario. Since its establishment in 1991, Cornerstone's work has focused on four sectors: facilities for children, public assembly projects, educational buildings, and seniors' communities; with projects located across Southwestern Ontario. Cornerstone is also a leader in design for sustainability; having completed numerous projects certified under a variety of green building standards.

In 2005, Richard became a LEED Accredited Professional through the Canada Green Building Council, which has led to an ongoing interest and involvement in the design of sustainable buildings and communities. In 2011, he completed an online graduate program in Sustainable Technology and Management at Arizona State University's School of Sustainable Engineering and the Built Environment. He is currently completing a Masters program at the University of Waterloo's Department of Environment and Resource Studies.



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ASHRAE WEBCAST

April 21, 2011 – 1:00 p.m. – 4:00 p.m. EDT

“Ground Source Heat Pump Systems: Putting the Earth to Work for You”

ASHRAE's Chapter Technology Transfer Committee with support from ClimateMaster, Mammoth, Taco, the International Ground Source Heat Pump Association, and the ASHRAE Foundation will present a free Webcast, “Ground Source Heat Pump Systems: Putting the Earth to Work for You” on Thursday, April 21, 2011. The program will be archived online until May 5, 2011 for those unable to participate in the live webcast. Registration will be required to view the archived program.

ASHRAE Introduces Its First iPhone App

Calculating ventilation rates just became a little easier with a new iPhone application designed specifically for an interactive calculation spreadsheet related to ASHRAE's ventilation standard.

Developed for Apple's iPhone, iPod touch and iPad, the ASHRAE Standard 62.1 app allows for convenient calculations while in the field, performing the outdoor air calculations found in the Ventilation Rate Procedure and the interactive 62MZCalc spreadsheets contained in the ASHRAE User's Manual for Standard 62.1, Ventilation for Acceptable Indoor Air Quality.

“As a leader in the advancement of the latest HVAC&R technology, it's only right that we utilize the latest smart phone technology,” Jim Fields, volunteer head of ASHRAE's publishing activities, said. “This new application ensures that engineers in the field have instant access to the most accurate information without having to return to their office to perform calculations.”

The ASHRAE 62.1 app can also be used to determine 62.1 compliance of simple ventilation systems (single zone, 100 percent outdoor-air and changeover-bypass VAV) as well as more complex ventilation systems (single-path, multiple zone recirculating) and can operate in both IP and metric units. Other benefits include the ability to store and access multiple projects within the app and also to email inputs and results for use in a spreadsheet at a later time.

The ASHRAE 62.1 app can be purchased through Apple's online iPhone App Store for \$19.99. The app applies to the calculations and spreadsheet in the 2007 standard and User's Manual. When the documents are updated to correspond with new editions of Standard 62.1, purchasers will receive a free upgrade.

This app was developed for ASHRAE by Carmel Software Corp., a firm specializing in the development of engineering and scientific mobile and tablet software applications.

ASHRAE 2010 BACnet® Published

A large collection of new technologies for emerging applications is contained in ASHRAE's newly published BACnet standard. ANSI/ASHRAE Standard 135-2010, BACnet A Data Communication Protocol for Building Automation and Control Networks, allows building equipment and systems manufactured by different companies to work together. It is the only open, consensus-developed standard in the building controls industry. The new standard contains 19 addenda approved since the 2008 standard was published.

“The 2010 version of the standard represents a large amount of work in a short amount of time by the BACnet committee,” Dave Robin, committee chair, said. “In just two years, the committee has added a wide variety of new technologies and contributed more than 400 pages to the standard.”

The standard contains several new ways to communicate: wireless communications is provided for applications where wired networks are impractical or expensive; a new XML vocabulary is provided for complex standard and proprietary data and metadata; a new character encoding method is provided for greater flexibility and compatibility with international text; and new state-of-the-art network security is defined to allow the creation of highly secure communications channels for sensitive data.

It also adds:

- higher speeds for MS/TP networks and wiring guidance for optically isolated segments
- new requirements for workstations and the definition of new kinds of workstations
- new engineering units to support smart grid and other emerging applications
- a new Global Group object for gathering, monitoring and distributing sets of data
- six new objects to support physical access control
- 12 new objects to support the full complement of all data types, including strings

The cost of ANSI/ASHRAE Standard 135-2010, BACnet A Data Communication Protocol for Building Automation and Control Networks, is \$170 (\$140 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.



Expanded Data Center Classes, Guidance Provide More Data Center Energy Efficiency Options

Since the publication of ASHRAE's Thermal Guidelines for Data Processing Environments in 2004, there has been a continued focus on providing guidance to datacenter operators regarding how to best maintain high reliability while operating their facilities in the most energy efficient manner.

In a new whitepaper, "2011 Thermal Guidelines for Data Processing Environments – Expanded Data Center Classes and Usage Guidance," published by ASHRAE Technical Committee (TC) 9.9, Mission Critical Facilities, Technology Spaces and Electronic Equipment, a roadmap has been outlined to facilitate a significant increase in the operational hours during which economizer systems are able to be used, and to increase the opportunity for datacenters to become "chillerless," eliminating mechanical cooling systems entirely, in order to realize improved Power Usage Effectiveness (PUE). The Green Grid created the popular PUE metric that is widely used to compare the total power to the IT power.

The major change that is introduced in the whitepaper is the addition of two new datacenter classes. The classes have been added primarily for facilities that are willing to explore the tradeoffs associated with the additional energy saving of the cooling system through increased economizer usage and what that means in terms of the impact to IT Equipment attributes such as reliability, internal energy, cost, performance, contamination, etc.

"This whitepaper is truly ground-breaking in that it achieves alignment between representatives of the major IT equipment manufacturers on wider environmental tolerances for IT equipment while providing guidance and a methodology for owners and operators to optimize the operating environment of their datacenter based on the criteria most important to their business needs," Don Beaty, chair of the Publications Subcommittee for TC 9.9, said. "In order to most quickly meet the current demands of the industry, we are using a two-step approach to introduce this important information sooner rather than later. The information in this whitepaper will be incorporated into the third edition of the Thermal Guidelines publication."

The whitepaper can be obtained from www.tc99.ashraetcs.org.

In other datacenter related news, the third edition of the ASHRAE datacom book, "Thermal Guidelines for Data Processing Environments" is scheduled for publication later this year.

ASHRAE Funds Undergraduate Project on Net Zero Energy Design Toolkit

A toolkit to help better understand the impacts of building construction related to net zero energy targets is being developed by undergraduate students in their senior year through an ASHRAE Undergraduate Senior Project Grant.

The grants, totaling some \$65,000, are awarded by ASHRAE to colleges and universities worldwide to promote the study and teaching of HVAC&R, encouraging undergraduate students to pursue related careers. The grants are used to design and construct projects. This year, 14 schools from around the world were awarded grants, including the University of Oregon for its proposal to develop a net zero energy design toolkit. As the top grant award winner, two students from the university are invited to present their project as part of the Student Program at the 2012 ASHRAE Winter Conference in Chicago.

As the building industry looks toward more energy efficient design, with the eventual goal of net zero energy use, additional tools are needed. The toolkit being developed by students will help facilitate understanding of the impact of design decisions on the rising cost of energy and enhance dialogue between engineers, architects, contractors and building owners.

"The toolkit offers a three-tiered approach to investigate, evaluate and experience the impacts of building construction in achieving net zero energy targets related to design, construction and occupancy," Allison Kwok, faculty advisor and branch advisor for the University of Oregon Student Branch, said. "The approach is provided through pre-occupancy onsite investigations, post-occupancy audits of the existing building stock and through a professional workshop between local members and students."

The toolkit will include a building air tightness testing system as well as an infrared camera to detect moisture, missing or defective insulation, structural shortcomings, HVAC problem areas, sources of heating and cooling loss, plumbing blocks, roof leaves and electric issues.

The kit will be used for pre- and post-occupant audits followed by a workshop, where students will discuss their real experiences with building performance analyses dealing with topics such as occupant comfort, system effectiveness and energy use.

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



Guide for Achieving Advanced Energy Savings Published by Industry Leaders

Guidance to get you at least halfway to achieving net-zero-energy design is now available from leading industry organizations in a new publication.

Advanced Energy Design Guide for Small to Medium Office Buildings: Achieving 50% Energy Savings Toward a Net-Zero-Energy Building is the first book in a series of Advanced Energy Design Guide (AEDG) publications that provides recommendations to achieve 50 percent 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 of North America (IES), the Department of Energy (DOE) and the United States Green Building Council (USGBC).

The series follows the earlier six-book series that provided guidance to achieve 30 percent savings. The ultimate goal is to provide guidance to achieve net-zero-energy buildings, that is buildings that produce more energy than they consume.

"This guide will help in the design of new office buildings and major renovations that consume substantially less energy compared to the minimum code-compliant design, resulting in lower operation costs," Bing Liu, chair of the 50% AEDG project committee, said. "Of equal importance is that energy-efficient buildings offer a great possibility to enhance the working environment, including indoor air quality, thermal comfort and natural lighting."

A significant addition to the new 50 percent guide is the inclusion of a performance path; specifically, offering guidance for early stage energy modeling.

"Whole-building energy modeling programs can provide more flexibility to evaluate the energy-efficient measures on an individual project," Liu said. "Simulation programs have learning curves of varying difficulty, but energy modeling for office design is highly encouraged and is considered necessary for achieving energy savings of 50 percent."

The groups note that meeting the 50 percent energy savings goal is challenging and requires more than doing business as usual. The Guide offers eight essentials to achieve advanced energy savings:

- Obtain building owner buy-in
- Assemble an experienced, innovative design team
- Adopt an integrated design process
- Consider a daylighting consultant
- Consider energy modeling
- Use building commissioning
- Train building users and operations staff
- Monitor the building

ASHRAE, AIA, IES, DOE and USGBC are currently developing the second guide in the 50 percent series, which will focus on K12 schools. Publication is targeted for fall of 2011, followed by a guide for medium/big box retail in the winter of 2012 and large hospitals in the spring of that year.

Advanced Energy Design Guide for Small to Medium Office Buildings: Achieving 50% Energy Savings Toward a Net-Zero-Energy Buildings is available as a free download at www.ashrae.org/freeaedg. A print version is available 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. Bulk discounts are available to individuals, companies and organizations who are interested in purchasing multiple copies.