



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

LONDON CANADA CHAPTER #116

<http://LondonCanada.AshraeChapters.org>

Mon April 30/2012

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Topic

HOSPITAL FILTRATION SYSTEMS AND AIRBORNE CONTAMINANT CONTROL

Speaker

Brian Monk, P.Eng. ASHRAE DL

Meeting - Monday April 30/2012

UWO - WINDERMERE MANOR
200 Collip Circle
London

5:30pm Social 6:00pm-Dinner
7:00pm to 8:00pm - Program

\$45.00 for London Chapter dues paid members

\$50.00 for others

\$10.00 for Students

<http://www.surveymonkey.com/s/9DGJSVZ>

please register at SurveyMonkey site if you plan on attending the
meeting

Presidents Message

As our ASHRAE year comes to an end I just want to thank everyone who came out to the meetings this year and supported the chapter. I also would like to thank the BOG and for all their hard work this past year and good luck to the new BOG for 2012/2013.

At the meeting I will call nominations to a close as we did have one person put their name forward to join the board for the upcoming ASHREA year but if you would still like to help out please contact one of the board members.

This month we are fortunate to have an ASHRAE Distinguished Lecturer Mr. Brain Monk from BBN to talk about "Hospital Filtration System & Airborne Contamination Control". Our meeting again will be held at Windermere Manor at UWO.

Thank you to Engineered Air for hosting the ASHRAE webcast at their office I know we had a few people that were able to come out.

If you plan on coming out to the Golf tournament please contact Jamie Kruspel for all the details but I know we only have a couple openings left.

I'm sure by now you or your company have been contact by Eric Shaw regarding Research Donations for this year again please help us reach our goal again this year.

I look forward to seeing all of you at the meeting.

Jason Vandenberghe
Chapter President 2010/2012
ASHRAE London Canada Chapter

Chapter Elections

The chapter elections are open for the 2012-2013 year for the Board of Directors: President, Vice, President, Treasurer and Secretary. Chapter chairs positions are also open and committees also require volunteers. If you can help out with any chapter activities, please contact any of the chapter officers.

Upcoming Meetings

Mon June 4/2012
Annual Chapter Golf Day
Fire Rock Golf Club
To register please follow this link:

<http://www.surveymonkey.com/s/66H32GK>

If you have a topic of idea for an upcoming meeting - please let us know so you can schedule for the 2012-2013 year.

March Meeting Summary

Mr Bob Bach, Energy Profiles Ltd, presented the OBC Requirements for Energy Efficiency for Part 3 Buildings. Bob reviewed the history of energy efficiency in the building code and the levels of performance. A review of the requirements was discussed.

For a copy of the speaker slide show, see the chapter web site.

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April Topic
Hospital Filtration Systems and Airborne Contaminant Control

Health Care facility air conditioning plays an important role in patient therapy by controlling airborne microorganisms, viruses, and hazardous chemicals that may be present in the indoor environment. The nature of the health care environment requires that special attention at the design stage be considered to limit air movement between departments, dilute or remove air borne contaminants, and recognize that temperature / humidity conditions may vary in areas within the same building.

Health Care HVAC designers must consider the control of airborne infectious disease, room pressure relationships, and Outdoor Air Requirements (ASHRAE Standard 62.1) to meet Health Care Facility IAQ concerns. Complicating the dilution strategy are ASHRAE Standard 90.1 guidelines calling for higher efficiency in LEED / High Performing Building Design. The presentation will focus on infection sources, control measures, air movement and proper filtration techniques that can be designed into the building's air handling system. An overview of anti-microbial construction techniques as they apply to dedicated outdoor air systems will also be discussed.

Learning Objectives:

1. Outline specific sections of ASHRAE HVAC Applications as it applies to Health Care Facility filtration.
2. Identify various AHU design strategies that can comply with AIA and CDC guidelines as they pertain to Health Care Facility infectious disease control.
3. Review the predominant filtration technologies that can be incorporated into central station AHU's to minimize odors, airborne microorganisms, viruses and chemical substances.
4. Evaluate methods of reducing life-cycle cost without sacrificing adequate air purification.
5. Explore HVAC design methods that consider anti-microbial construction and serve as a means of controlling airborne infection in the health care environment.

Speaker Bio
Brian Monk, P.Eng. , ASHRAE DL

Brian Monk is President of BBN Tech Inc., Montreal, Canada, specializing in design of air treatment systems, including airborne contaminant control and dedicated outdoor air systems with energy recovery.



Previously Mr. Monk was Director of Sales / Marketing for Carrier Corporation's custom air handling division. During this period Mr. Monk was also an instructor for Carrier University's Sustainability Symposiums under the International Association for Continuing Education and Training (IACET) program which provides CEU Credit for Professional Engineering Licensure in the USA

From 1997 to 2005, Mr. Monk was the Vice-President of Sales / Marketing for Dectron International Inc., specializing in the manufacturing of dehumidification / molecular filtration systems for commercial and industrial environments. His primary responsibilities were to establish and maintain a sales distribution network throughout the Americas', Middle East and Europe. His academic background comprises of a college degree in Applied Science (Building Systems Engineering Technology) from Vanier College of Montreal and a Bachelor of Building Engineering from Concordia University of Montreal. He is a Registered Professional Engineer with the Province of Quebec, Canada, and the Association of Professional Engineers and Geoscientists of British Columbia, Canada.

Mr. Monk is an ASHRAE Distinguished Lecturer, Member of Committee TC 2.3 Gaseous Air Contaminant Removal Equipment, and TG HVAC Security. He is also Part-Time Professor at Concordia University, Montreal, Canada, in the Faculty of Building, Civil and Environmental Engineering.

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ASHRAE Research Promotion Campaign – 2011/2012

We are on the home stretch here in London for the 2011/2012 Research Promotion Campaign...

Our Mission: To improve the quality of life and to answer tomorrow's questions through research TODAY.

The Research Promotion Campaign annually raises funds to support ASHRAE's research program.

It is conducted by the Society's membership through local chapter volunteers and receives over 7,000 contributions each year from the membership and

companies associated with the HVAC&R industry.

This annual support totals more than \$2 million annually at the society level to help fund over \$14 million in research projects and student grant-in-aids.

In the last few years, Region II (our region) has received research grants totaling more than ½ Million dollars in support of 6 local Region II projects.

Active research projects are conducted all around the world at various universities and organizations.

Here is what our chapter in London has raised to this point...

Your contribution can be submitted with a Member's annual dues payment, by allocating all or a portion of their travel reimbursement, or by sending contributions to the Chapter's Research Promotion Chair or ASHRAE Headquarters.

We would be happy to accept your donations at our regular meetings, or can arrange to pick them up at your location at a time convenient to you.

Research investments sent directly to Headquarters should be addressed to:

Research Promotion, 1791 Tullie Circle, Atlanta, GA 30329.

Cheques should be made payable to ASHRAE Research Canada. Individuals and companies are also able to submit their contributions online at:

www.ashrae.org/contribute

100% of every invested dollar goes directly into the research program.

Regards, and thank you for your support in advance...

Eric W. Shaw
ASHRAE RP Chair - London ASHRAE Chapter



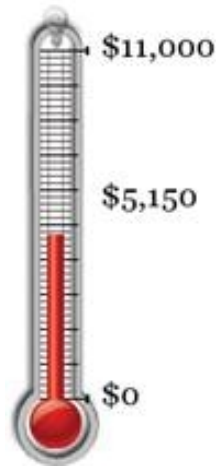
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Membership Promotion Committee

Greetings from your Membership Promotion Committee,

We would like to welcome several new members to the ASHRAE London membership

NEW MEMBERS

Imtiaz Yusuf
Brian Shaw
Chris Anderson

Kevin McGachy
John Freeman

ASHRAE Handbooks for the 2012 year will be mailed at the end of this month. We ask that all members can please take a minute to confirm the address you have on file with ASHRAE is the best address for your handbook to be mailed to. Please do this by April 27th, or your handbook will be mailed to the latest address ASHRAE has on file.

Please keep an eye out for the local chapter membership roster, which will be emailed out in pdf format at the end of the month. We have decided to distribute in pdf format this year in an effort to become more sustainable. If you have any comments on the format or would prefer a hard copy of the membership roster please let the membership committee know.

We as the local Chapter continue to encourage our members to seek out anyone in the industry who may benefit from being connected with ASHRAE. Please refer them to me if they have any questions or need any further questions regarding membership.

We also continue to encourage membership advancement for any associate members that are eligible. Please contact me for more information or see the October Newsletter.

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

MEMBER BIO's

Kevin McGachy P.Eng. New ASHRAE Member

Graduated in 1998 from UWO with a Mechanical Engineering degree; Kevin has worked within the HVAC community for the past 3 years and previously worked 13 years within the automotive industry as a manager, project leader and problem solver. Recently joining Change'Air Kevin brings a background of sales, controls, planning and solution development to the role of Regional Sales Manager.

John Freeman

ASHRAE Membership Transfer

John Freeman was born and raised in Hamilton. He studied at the University of Western Ontario where he received his Mechanical Engineering degree in 2008. Over the next 3+ years John worked for Trane assisting contractors, engineers and owners with their HVAC system needs. His focus was on commercial, institutional, educational and industrial new construction projects in Hamilton and the Niagara Peninsula. John has recently returned to London to accept a role with E.H. Price and looks forward to supporting the local ASHRAE chapter.

Cold Climate Design Guide

In conjunction with the 7th International Cold Climate Conference REHVA and ASHRAE are looking at developing a Cold Climate Design Guide. We are looking for volunteers to help out and are hoping that you can pass on the word to those that maybe interested. Can you please let me know if you or one of your cohorts are interested in being a part of this great opportunity?

The kick off meeting will be held in San Antonio.

Erich Binder
Director and Regional Chairman
ASHRAE Region XI
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Please join ASHRAE in Calgary, Alberta on November 12-14, 2012 for the 7th International Cold Climate Conference.
www.ashrae.org/ColdClimate

ASHRAE Handbook Updates: IMPORTANT.

We have updates regarding the 2012 ASHRAE Handbook!

The list will be run on April 30 of all members who have purchased a Handbook with their membership, and sent to the vendor on May 2, 2012.

Around May 28, 2012, all print and CD Handbooks will mail out to the members. Because of our quantity, Handbooks are sent a bulk fourth class rate, which is the most cost effective method for ASHRAE and our members.

- Members outside North America should expect to receive their Handbook up to eight (8) weeks from the date of shipment
- Members in Canada should expect to receive their Handbook in approximately 21-30 business days from the date of shipment
- Members in the US should expect to receive their Handbook in approximately 14-20 business days from the date of shipment

Most important for our chapter leaders: NOW is the time to remind your members if they have contact information changes of any kind, they need to get them to us by Friday, April 27, 12p EST, to ensure the member is mailed their Handbook at the best possible address.

Thank you, and please let me know if you have any questions.

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50 Percent Energy Savings for Retail Stores Now Available, No Coupon Required

Energy costs are typically the second highest operating expense for a retailer, so use of the latest 50% Advanced Energy Design Guide can help in creating a cost-effective design for medium to big box retail stores and can have a direct and significant impact on profitability. For a discount on energy efficiency, owners, engineers, designers, architects and others on the building team are encouraged to download Advanced Energy Design Guide for Medium to Big Box Retail Buildings: Achieving 50% Energy Savings Toward a Net-Zero-Energy Building. The Guide applies to medium to big box retail buildings with gross floor areas between 20,000 and 100,000 sq. ft.; however, many of the recommendations also can be applied to smaller or larger retail buildings. It is the third book in a series of Advanced Energy Design Guide (AEDG) publications that provides recommendations to achieve 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.

“When the comfort of a customer can impact a purchase in a shopping environment it’s important for retail stores to find a balance between energy efficient measures for the building and the convenience for their customers,” Shanti Pless, chair of the AEDG project committee, said. “This guide offers guidance and tips for implementing successful energy savings strategies while enhancing the shopping experience.”

The new guide features easy-to-follow recommendations for each of the US climate zones and tips on how to implement those recommendations. Case studies and technology examples provide real-life examples of how retailers have achieved significant energy savings.

Also included is information on integrated design, including best practices as a necessary component in achieving 50% energy and the inclusion of a performance path—specifically, offering annual energy use targets to help with goal setting.

Additional design tips include:

- Information on integrating absolute energy use targets into the design process.
- Different ways to daylight sales floors, storage areas, offices and conference/break rooms.
- HVAC roof-top unit configuration and zoning strategies.
- HVAC ventilation air control strategies.
- Recommendations for commissioning and measurement and verification to ensure that energy savings potentials are realized.

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).

ASHRAE, AIA, IES, DOE and USGBC are currently developing the fourth and final guide in the 50% series, which will focus on large hospitals and be available in the spring of 2012.

The guide follows the earlier six-book 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 produce more energy than they consume.

Advanced Energy Design Guide for Medium to Big Box Retail Buildings: Achieving 50% Energy Savings Toward a Net-Zero-Energy Building 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.

Standard Features Energy Savings

2011 version of the Green Standard Now Available from ASHRAE, USGBC, IES

Changes to help make buildings and systems more sustainable are part of the newly published version of the high performance green building standard from ASHRAE, the U.S. Green Building Council (USGBC) and the Illuminating Engineering Society (IES)

ANSI/ASHRAE/USGBC/IES Standard 189.1-2011, Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings, provides a green building foundation for those who strive to design, build and operate high performance buildings. It covers key topic areas of site sustainability, water-use efficiency, energy efficiency, indoor environmental quality and the building's impact on the atmosphere, materials and resources. When first introduced in 2009, the standard was the first code-intended commercial green building standard in the United States.

"Since Standard 189.1 was first published, we have received much input from the industry offering suggestions on how to strengthen it in all areas," chair Dennis Stanke said. "This 2011 version incorporates much of that input. More importantly, the 2011 version incorporates updated connections to its referenced standards primarily ANSI/ASHRAE/IES 90.1-2010 and ANSI/ASHRAE 62.1-2010. Compliance with these updated provisions will result in further improvements to indoor environmental quality, while further reducing energy use and environmental impact through high-performance building design, construction and operation."

The most significant change in energy-related provisions results from new requirements in ANSI/ASHRAE/IES Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings, adding to and superseding requirements in the 2007 version. In October 2011, the U.S. Department of Energy found that the 2010 version of Standard 90.1 contains significant energy savings over the 2007 standard. The energy savings in the Standard 90.1-2010 provisions also result in energy savings for building projects complying with Standard 189.1, according to Stanke.

In addition, mandatory and prescriptive renewable energy requirements were clarified to reduce confusion and simplify calculations; now both mandatory provisions to prepare for on-site renewable energy and provisions to produce prescribed levels of renewable energy must be met. Additionally, buildings that meet the prescriptive requirement for renewable energy production are now deemed to comply with the mandatory requirement for renewable energy site-preparation.

The standard also updates the performance option for energy efficiency (Appendix D) so that it refers to Appendix G of Standard 90.1-2010, which is now a normative appendix. Appendix G of 90.1 applies to projects seeking to reduce annual energy cost more than would be possible by merely meeting the requirements of that standard. Appendix D in Standard 189.1, on the other hand, provides a performance option for compliance as an alternative to the less-complex prescriptive option; it must show that the project design results in annual energy cost equal to or less than would be possible by meeting the mandatory plus prescriptive requirements of the standard, according to Stanke.

Additional changes to the 2011 standard include:

- More stringent Lighting Power Density allowances due to the change in reference to Standard 90.1-2010. Both interior and exterior values are now set as a percentage of the Standard 90.1 allowances, based on building, space or area type.
- Automatic controls are now required for lighted signs visible during daytime hours; controls must reduce the lighting power to 35 percent of full power. For other outdoor signs, automatic controls must now turn off lighting during daytime hours and reduce the lighting power to 70 percent of full power after midnight.
- Open-graded (uniformed size) aggregate and porous pavers (e.g., open-grid pavers) qualify as a hardscape surface for heat island mitigation with no further testing. Permeable pavement and permeable pavers must meet a minimum percolation rate rather than a minimum solar reflectance index (SRI).

Standard 189.1 is currently a jurisdictional compliance option in the International Green Construction Code developed by the International Code Council, ASTM International and the American Institute of Architects.

The cost of ANSI/ASHRAE/USGBC/IES Standard 189.1-2011, Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings, \$119 (\$99 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.

Proposed Changes Related to Combustion Safety, Infiltration to ASHRAE Residential IAQ Standard

Public comment is being sought on proposed changes to ASHRAE's residential indoor air quality standard regarding combustion safety in existing homes and default infiltration in new construction. 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.

Five proposed addenda to Standard 62.2-2010 currently are open for public review. For more information, visit www.ashrae.org/publicreviews.

Proposed addendum p applies primarily to existing homes. The standard as written addresses combustion safety mainly in a prescriptive manner, with the assumptions that went into determining the requirements based on typical construction for new homes. Given the characteristics in older homes, especially leakage levels, following these requirements precisely often could have resulted in requiring replacement of equipment that in practice works fine.

Also open for public comment is addendum r, which has a larger impact on new construction. Historically, Standard 62.2 has allowed all homes to have a default infiltration credit that can be taken without any knowledge about how leaky the house really is, according to Francisco. Especially as houses have gotten tighter, the assumed infiltration may be substantially higher than actually exists in many homes, according to Francisco.

Addenda p and r are open for public review from March 23 until May 7.